CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

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PRELIMINARY SHORT SUBDIVISION

STAFF REPORT & DECISION

SUB22-009 (Exhibit 1)

Project No.:	SUB22-009
Description:	A request to subdivide one (1) existing lot into four (4) new lots.
Applicant / Owner:	Jintao (Adison) Cui / Home-Link Capital, LLC.
Subject Property:	4833 90th Avenue SE, Mercer Island, WA 98040; Identified by King County Assessor tax parcel number 4351300487.
Zoning District:	Single Family Residential (R-8.4)
Staff Contact:	Ryan Harriman, EMPA, AICP – Planning Manager Molly McGuire – Planner
Exhibits:	1. SUB22-009 Staff Report and Decision, dated February 12, 2024; 2. Development Application, dated September 30, 2022 3. Notice of Complete Application, issued by the City of Mercer Island on December 23, 2022 4. Revised Public Notice of Application, issued by the City of Mercer Island on January 9, 2023 5. Revised Development Plan Set, dated January 10, 2024 6. Project Narrative, received by the City of Mercer Island on September 1, 2023 7. Revised Project Narrative, dated August 20, 2023 8. Title Report dated December 9, 2022 9. Arborist Report, prepared Cascara Tree Consulting, dated August 9, 2023 10. Tree Inventory Worksheet, dated January 7, 2024 11. Tree Removal Assessment, prepared by Cascara Tree Consulting, dated July 17, 2023 12. Geotechnical Engineering Investigation & Soil Infiltration Evaluation, prepared by GEO Group Northwest, Inc., dated February 18, 2022

13. Addendum to Geotechnical Engineering Investigation & Soil Infiltration Evaluation, prepared by GEO Group Northwest, Inc., dated September 16, 2022
14. Drainage Report, prepared by Pacific Land Engineering, dated November 1, 2022
15. Public Comment from Michael Fink, received by the City of Mercer Island on January 24, 2023
16. Public Comment from Veronika Ziegler and Jeremy Ung, received by the City of Mercer Island on January 30, 2023
17. Public Comment from Keith Chan, received by the City of Mercer Island on February 2, 2023
18. Applicant Response to Public Comments, dated September 1, 2023
19. City Review Letters
    - 19.1. First Review Letter, dated April 6, 2023
    - 19.2. Revised First Review Letter, dated June 5, 2023
    - 19.3. Second Review Letter, dated October 25, 2023
    - 19.4. Third Review Letter, dated December 29, 2023
20. Applicant Response to City Review Letters
    - 20.1. Response to First Review Letter, dated December 20, 2022
    - 20.2. Response to Revised First Review Letter, dated September 1, 2023
    - 20.3. Arborist Response to Revised First Review Letter, dated August 9, 2023
    - 20.4. Engineer Response to Revised First Review Letter, August 20, 2023
    - 20.5. Arborist Response to Second Review Letter, dated December 6, 2023
    - 20.6. Engineer Response to Second Review Letter, dated December 8, 2023
    - 20.7. Arborist Response to Third Review Letter, dated January 7, 2024
    - 20.8. Engineer Response to Third Review Letter, dated January 8, 2024
21. Mercer Island School Bus Routes
    - 21.1. Correspondence from William Gerdes, Mercer Island School District, dated January 11, 2024
    - 21.2. School Bus Stops for Island Park Elementary School
    - 21.3. School Bus Stops for Island Middle School
    - 21.4. School Bus Stops for Mercer Island High School
22. Civil Engineering Review Preliminary Approval, dated February 7, 2024
23. Notice of Decision, issued by the City of Mercer Island on February 12, 2024

I. APPLICATION OVERVIEW

Project Overview: On November 16, 2022, the Applicant applied for a Preliminary Short Subdivision, SUB22-009, to divide the subject property into four lots. The subject property has an area of 41,165 square feet (0.945 acres) and the resulting lots will have areas of 10,389 square feet (Lot 1), 10,357 square feet (Lot 2), 10,219 square feet (Lot 3), and 10,180 square feet (Lot 4). All lots will be accessed from 90th Avenue SE via a new shared access tract along the north side of the parent lot. The subject property is zoned Single-Family Residential (zoned R-8.4). Adjacent properties are within the R-8.4 zone and the adjacent properties contain residential uses.

Existing Conditions: The subject property is located at 4833 90th Avenue SE and is zoned Single-Family Residential (zoned R-8.4). The subject property is bordered by fully developed residential properties across its north and south property lines, by Island Crest Way across its westerly property line, and by 90th Avenue SE across its easterly property. The subject property contains an existing single-family residence, an attached garage / carport, and U-shaped gravel driveway, all of which will be removed. The existing ground cover in the subject property predominantly consists of large cluster of mature trees, second growth understory vegetation, and single-family back yard lawns. The existing site topography is oriented east to west with an overall grade slope of two (2) percent to five (5) percent before changing to over 20 percent within Island Crest Way right-of-way, adjacent to subject property westerly property line.

Location: The subject property is located at 4833 90th Avenue SE (King County parcel number 4351300487). The subject property is situated in the NW Quarter of Section 19, Township 24, and Range 5, W.M. in the City of Mercer Island, King County, WA.

Access: The proposed development will be accessed from 90th Avenue SE via a new shared access tract along the north side of the parent lot.

Contact Information:

Primary Contact	Applicant/Owner/Developer	Engineer
Home-Link Capital LLC c/o Jintao (Adison) Cui 7683 SE 27th St, 3186 Mercer Island, WA 98040 Phone: 206-265-0810 Email: adisoncui@outlook.com	Home-Link Capital LLC c/o Jintao (Adison) Cui 7683 SE 27th St, 3186 Mercer Island, WA 98040 Phone: 206-265-0810 Email: adisoncui@outlook.com	Pacific Land Engineering c/o Mazen Haidar, PE Principal Engineer Bellevue, WA 98005 Phone: 425-618-6160 Email: mazen@pacificlandwa.com

Terms used in this staff report:

Term	Refers to, unless otherwise specified:
Applicant	Home-Link Capital, LLC
Proposed development	Cui Preliminary Short Subdivision; plat.

Subject property	The site where development is located as defined in this staff report.
Property Owner	Home-link Capital, LLC.
City	City of Mercer Island.
MICC	Mercer Island City Code.
Code Official	Community and Planning Development Director city of Mercer Island or a duly authorized designee.
HOA	Homeowner's Association (or entity as defined by the Developer and accepted by the City.
CC&Rs	HOA's Covenants, Conditions, and Restrictions.

II. PROCEDURE AND NOTICE REQUIREMENTS

1. Review Type: Pursuant to MICC 19.15.030, Table A, applications for preliminary short plats are Type III reviews, which require a notice of application, a 30-day public comment period, and a notice of decision.

   Staff Finding: The application for the proposed development was correctly classified and processed as a Type III land use review.

2. Application: Pursuant to the procedures in MICC 19.15.070, the proposed development application, City File No. SUB22-009, was submitted on November 16, 2022 **(Exhibit 2)** and deemed complete on December 22, 2022 **(Exhibit 3)**. Included with the application was a preliminary plan set that was updated throughout the review process. The preliminary plan set is depicted in **Exhibit 5.**

   Staff Finding: The application for the proposed development is consistent with the procedures of MICC 19.15.070.

3. Pre-Application Meeting: The proposed development was reviewed by the City through the pre-application meeting process (PRE22-028) and requirements of MICC 19.15.050 on May 17, 2022.

   Staff Finding: The application for the proposed development met the requirements for the pre-application meeting.

4. Notice of Application: The City issued the notice of application for the proposed development on January 3, 2023 **(Exhibit 3).** Due to errors in the noticing process, the City issued a revised notice of application on January 9, 2023, consistent with the provisions of MICC 19.15.090, which include the following methods: a mailing sent to neighboring property owners within 300-feet of the subject property; a notice sign posted on the subject property; and publication in the City of Mercer Island's weekly permit bulletin. The notice of application began a 30-day comment period, which took place between January 9, 2023 to February 8, 2023 **(Exhibit 4).**

   Staff Finding: The notice of application and comment period is consistent with the provisions of MICC 19.15.090.

5. Opportunities for Public Comment: Three public comment letters/emails were received during the comment period, January 9, 2023 to February 8, 2023, associated with the Notice of Application. The City does not respond to comment letters. Comment letters are collected, evaluated, provided

to the Applicant, addressed by the Applicant, and included in the staff report as part of the official record.

Staff Finding: Three public comment letters/emails were received during the comment period associated with the Notice of Application. All public comments are contained in **Exhibits 15, 16, and 17.**

6. Response to Public Comment: The City reviews the comment letters and considers them during the review process. The City does not respond to comment letters. Comment letters are collected, evaluated, provided to the Applicant, and included in the staff report as parties of record. The Applicant is responsible for addressing comments from the public.

   Staff Finding: The Applicant provided the City with a response to the public comments in **Exhibits 15, 16, and 17 (Exhibit 18)**.

7. Review Process: The City provided multiple rounds of review of the proposed development and associated materials. Please refer to the comment letters in **Exhibit 19**. The Applicant responded to each round of review, please refer to **Exhibit 20**.

   Staff Finding: The review process is consistent with the provisions of the MICC.

8. Public Hearing: Pursuant to MICC 19.15.030 Table A and B, a public hearing is not required for Type I-III permits.

   Staff Finding: A public hearing is not required.

III. STATE ENVIRONMENTAL POLICY ACT (SEPA)

9. The proposed development is categorically exempt from SEPA pursuant to WAC 197-11-800(6)(d).

   Staff Finding: The proposed development does not require SEPA review.

IV. ZONING AND COMPREHENSIVE PLAN DESIGNATIONS

10. Site Zoning & Land Use. The subject property is located within the Single-Family Residential Zone, R-8.4. According to MICC 19.02.010, single-family dwelling units are listed as a permitted use in the R-8.4 zone.

    Staff Finding: The proposed development is consistent with the permitted uses provided in MICC 19.02.010.

11. Comprehensive Plan Policies. The proposed development of a single-family residential short subdivision is consistent and compatible with the "single-Family Residential" R-8.4 land use designation and the policies of the City of Mercer Island Comprehensive Plan: Planning for Generations 2015-2035, adopted in 2016.

    Staff Finding: The proposed development is consistent with the City of Mercer Island Comprehensive Plan.

12. Adjacent Zoning and Comprehensive Designations. The proposed development is compatible with the surrounding zoning and Comprehensive Plan designations as follows:

	Zoning Designation	**Comprehensive Plan Designation**
North	R-8.4	Single Family Residential R-8.4
South	R-8.4	Single Family Residential R-8.4

East	R-8.4	Single Family Residential R-8.4
West	R-8.4	Single Family Residential R-8.4

Staff Finding: The proposed development is consistent with the adjacent zoning and the Comprehensive Plan.

13. Site Calculations. The table below reflects the area for the proposed development **(Exhibit 5)**.

Lot #	Gross Lot Area (sq ft)	Max. GFA 40% (sq ft)	Net Lot Area (sq ft)	Max. Lot Coverage (40%) (sq ft)	Max. Hardscape (9%) (sq ft)
1	10,390	4,156	10,390	4,156	935
2	10,376	4,150	10,376	4,150	934
3	10,220	4,088	10,220	4,999	920
4	10,180	4,072	10,180	4,072	916

Property Areas	Area (sq ft)	Area (AC)
Property	41,165	0.945

Staff Finding: The proposed development is consistent with the numerical standards for lots within the R-8.4 zone.

V. TREES

14. Pursuant to MICC 19.08.030(E)(5), the proposed development shall be designed to comply with the provisions of Chapter 19.10 MICC.

Staff Finding: The Applicant submitted a Preliminary Arborist Report prepared by Cascara Tree Consulting **(Exhibit 9)**. The arborist report inventories and assesses trees on the subject site, and specifies which trees are most suitable for preservation.

Staff Finding: According to the plan set in **Exhibit 5**, the Arborist report in **Exhibit 9**, and the Tree Inventory Worksheet in **Exhibit 10,** Cascara Tree Consulting inventoried and assessed 51 regulated trees on the subject property. The Applicant plans to remove 33 trees as part of the proposed development. Two trees were removed less than five years prior to the development application, and therefore, must be included in the removal associated with the proposed development, bringing the total of trees removed to 35 trees.

Staff Finding: Tree removal and retention/protection are identified on the preliminary plan set **(Exhibit 5)**. The proposed tree retention plan was reviewed by the City Arborist and as conditioned, complies with the provisions of Chapter 19.10 MICC. The following table indicates the proposed tree removal and replacement required by the code. Due to the condition of the trees proposed for removal, the City Arborist reduced the amount of required replacement trees from 129 to 53 trees.

Diameter of Removed Tree (measures 4.5-feet above ground)	Tree Replacement Ratio	Number of Trees Proposed for Removal	Number of Trees Required for Replacement Based on Size/Type

Less than 10-inches and non-viable trees	1	0	0
10-inches up to 24-inches	2	18	36
Greater than 24-inches up to 36-inches	3	3	9
Greater than 36-inches and any exceptional tree	6	14	84
		Total Required Tree Replacement:	129 Required

15. Pursuant to the provisions of MICC 19.10.060(A)(2)(a), the proposed development shall retain 30 percent of trees with a diameter of 10 inches or greater, or that otherwise meet the definition of a large tree, shall be retained over a rolling five-year period.

Staff Finding: The plan set in **Exhibit 5**, the Arborist report in **Exhibit 9**, and the Tree Inventory Worksheet in **Exhibit 10** are not consistent with each other, as two trees that were removed prior to the application of the proposed development are not included in the plan set or Tree Inventory Worksheet. The preliminary approval of the short subdivision is conditioned to require the applicant to update the Tree Inventory Worksheet and Plan Set to be consistent with the Arborist report. The proposed development will retain 16 of the 51 trees on site, which meets the 30 percent retention requirement.

Staff Finding: Based on the plan set in **Exhibit 5**, the Arborist report in **Exhibit 9**, and the Tree Inventory Worksheet in **Exhibit 10**, the proposed development is consistent with the requirements of MICC 19.10.060(A)(2)(a).

16. Pursuant to the provisions of MICC 19.10.070(A) removed trees are required to be replaced at the ratio provided based on the diameter of the removed tree.

Staff Finding: Based on the plan set in **Exhibit 5**, the Arborist report in **Exhibit 9**, and the Tree Inventory Worksheet in **Exhibit 10,** the proposed development has a retention rate of 31 percent. A total of 129 trees are required to be replaced and located consistent with MICC 19.10.070(B). Two of these trees (Tree Nos. 33 and 55) are proposed to be removed consistent with MICC 19.10.060(A)(3)(b). The applicant has demonstrated that the retention of these trees would result in the limitation of constructable gross floor area to less than 85 percent of the maximum gross floor area allowed. Due to the condition of the trees proposed to be removed, the City Arborist reduced the amount of required replacement trees from 129 to 53 trees. A replanting plan is required to be submitted during the site development permit review phase to confirm replacements can be placed on the proposed lots. Tree replacement will be required before final plat or final building inspections. At least half of the trees must be Pacific Northwest native. The trees must be placed at least 10-feet apart from other trees, structures, fences and utilities. If the Applicant can demonstrate no room exists on the subject property for all the replacement trees, the remainder of the replacement trees can be a fee in lieu. The Applicant shall pay a fee in lieu payment consistent with the current City of Mercer Island Fee Schedule for any tree that cannot be planted at least 10-feet away from each other, existing trees and infrastructure such as fences.

VI. CRITICAL AREAS

17. Except as specifically exempted by MICC 19.07.120, exemptions, the regulations in Chapter 19.07 MICC apply to land uses, development activity, and all structures and facilities within the City that contain any of the following critical areas and/or their buffers, as defined in Chapter 19.16 MICC:

- Geologically hazardous areas;
- Fish and wildlife habitat conservation areas;
- Watercourses; and
- Wetlands.

Staff Finding: A geologically hazardous area is mapped along the western side of the subject property and outside any building envelope. No impacts are expected. Geotechnical review of development within the geologically hazardous areas may be required during the review of future building permits and site development.

VII. CONSISTENCY WITH THE SUBDIVISION CODE

18. The general provisions for Short Subdivisions are listed in MICC 19.08.010:

a. Land contained in a prior short subdivision may not be further divided in any manner for a period of five years after the recording of the final plat with King County without the filing of a long subdivision plat; however when a short subdivision consists of less than four lots, an alteration to the short subdivision is permitted so long as no more than four lots are created through the total short subdivision process.

Staff Finding: The subject property has not been divided in the five years prior to this application. This standard does not apply.

b. In their interpretation and application, the provisions of this chapter shall be held to be the minimum requirements adopted for the promotion of the public safety, health, and general welfare. This chapter is not intended to interfere with or abrogate or annul any easements, covenants, conditions, or restrictions created or imposed by plats or deeds or record or by agreements between parties, except where the provisions of this chapter are more restrictive, in which event the provisions of this chapter shall govern.

Staff Finding: The proposed short subdivision will promote the public safety, health, and general welfare of the City and its citizens, provided the conditions of approval are met.

c. Preliminary long subdivision and short subdivision applications shall be processed simultaneously with all applications for rezones, variances, planned unit developments, and site plan approvals to the extent the procedural requirements of those actions allow simultaneous action.

Staff Finding: The applicant has not applied for a rezone, variance, planned unit development, or site plan approval. This standard does not apply.

19. Long Subdivision or Short Subdivision Plans. Pursuant to MICC 19.08.020(C)(2), the Applicant shall provide copies of fully dimensioned plans of the project prepared by a Washington registered civil engineer or land surveyor, meeting the requirements of Chapter 19.07 MICC, Environment, and containing any other information deemed necessary by the code official. The city engineer may waive the requirement that an engineer or surveyor prepare the plans for a short subdivision. The submitted plans shall identify the proposed building pad location for each proposed lot pursuant to MICC 19.09.090.

Staff Finding: The Applicant provided dimensioned plans prepared by a Washington registered civil engineer or land surveyor, meeting the requirements of Chapter 19.07 MICC, Environment, and containing any other information deemed necessary by the code official. The submitted plans identify the proposed building pad location for each lot pursuant to MICC 19.09.090 **(Exhibit 5)**.

20. Preliminary Application Procedure. Pursuant to MICC 19.08.020(D)(1), All preliminary approvals or denials of long subdivisions or short subdivisions shall be accompanied by written findings of fact demonstrating that:

    a. The project does or does not make appropriate provisions for the public health, safety, and general welfare and for such open spaces, drainage ways, streets or roads, alleys, other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds and all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school;

    b. The public use and interest will or will not be served by approval of the project; and

    c. The project does or does not conform to applicable zoning and land use regulations.

Staff Finding: The proposed development is consistent with MICC 19.08.020(D)(1)(a-c). The proposed development makes appropriate provisions for public health, safety, and general welfare by providing adequate infrastructure to support future development.

Staff Finding: Goal 2.7 of the Housing Element of the City's Comprehensive Plan states that the City should "Encourage infill development on vacant or under-utilized sites that are outside of critical areas and ensure that the infill is compatible with the scale and character of the surrounding neighborhoods." The proposed subdivision is located in a single-family residential zone with adjacent single-family residential uses. The proposed development would foster infill development on a site with adequate lot area outside of critical areas. The proposed development is single-family residential, with a density commensurate with existing development within the vicinity of the subject property. The public use and interest will be served by approval of the project due to compliance with the comprehensive plan, growth targets, and coordinated growth. The proposed development would foster infill development on a site with adequate lot area outside of critical areas.

Staff Finding: Pursuant to MICC 19.16.010, open space functions as protection of natural resources and biodiversity, recreation spaces, development of neighborhood gathering spaces, and promotion of public health benefits. Open space areas are left predominantly in a vegetated state to create urban separators and greenbelts, and:

a. Sustain native ecosystems, connect and increase protective buffers for environmentally critical areas; or

b. Provide a visual contrast to continuous development, reinforce community identity and aesthetics; or

c. Provide links between important environmental or recreational resources.

The proposed development does not contain enough area for designated open space, but the required tree preservation and replanting will serve as an adequate substitution.

Staff Finding: The proposed development is accessed by a shared private access road that is consistent with the required width and slope criteria set out in MICC 19.09.040.

Staff Finding: Students living within the proposed development and adjacent properties have access to bus transportation to and from Island Park Elementary (0.05 miles from the bus stop), Island Middle School (0.05 miles from the bus stop), and Mercer Island High School (0.18 miles from the bus stop). The bus stops for Island Park Elementary and Island Middle School are located near the subject property at 90th Avenue SE and SE 48th Street, and the bus stop for Mercer Island High School is located at 90th Avenue SE and SE 74th Street (**Exhibit 21**).

Staff Finding: The proposed development makes appropriate provisions for drainage ways. Stormwater generated from the proposed development will be conveyed to the public stormwater system on Island Crest Way.

Staff Finding: MICC 19.08.020(D)(1) requires the proposed development to make appropriate provisions for transit stops. This provision does not apply to the proposed development as the subject property is not served by a transit route.

Staff Finding: The proposed development makes appropriate provisions for potable water supplies. The proposed development must connect to the public water system.

Staff Finding: The proposed development makes appropriate provisions for sanitary waste. The residential units created by the proposed development must connect to the public sewage system. Additionally, future residences will be served by waste collection.

Staff Finding: The proposed development makes appropriate provisions for parks and recreation. The Applicant shall be required to pay a park impact fee to the City which will be utilized for the development of the City-wide Parks and Recreation system. The creation of recreation space is not practical and is cost prohibitive for a four-lot short subdivision.

21. Pursuant to MICC 19.08.020(D)(2), the code official shall grant preliminary approval for a short subdivision if the application is in proper form and the project complies with the design standards set out in MICC 19.08.030, the comprehensive plan, and other applicable development standards.

Staff Finding: The application is in proper form and the project complies with the design standards set out in MICC 19.08.030. The proposed development is consistent with Land Use Goal 15 ("Mercer Island should remain principally a low density, single-family residential community.") and Land Use Policy 16.5 ("Infill development on vacant or under-utilized sites should occur outside of critical areas and ensure that the infill is compatible with the surrounding neighborhoods."). The proposed and current use of the subject property is single-family residential, which is a permitted use in the R-8.4 zone and consistent with the Comprehensive Plan Land Use and Housing elements.

22. Pursuant to MICC 19.08.030(A), Compliance with Other Laws and Regulations, the proposed subdivision shall comply with all other chapters of this title; the Shoreline Management Act; and other applicable city, state, and federal legislation.

Staff Finding: The proposed development complies with all other chapters of Title 19 MICC. The subject property is not within 200 feet of a shoreline; therefore, the Shoreline Management Act does not apply to the proposed development. The proposed development complies with state legislation, specifically the State Environmental Policy Act as set forth in Chapter 197-11 WAC and with the state subdivision statutes contained within Chapter 58.17 RCW.

23. Pursuant to MICC 19.08.030(B)(1), the proposed development shall be reconciled as far as possible with current official plans for acquisition and development of arterial or other public streets, trails, public buildings, utilities, parks, playgrounds, and other public improvements.

Staff Finding: The current City of Mercer Island official plans for acquisition and development of arterial or other public streets, trails, public buildings, utilities, parks, playgrounds, and other public improvements do not designate any portion of the subject property. This standard does not apply.

24. Pursuant to MICC 19.08.030(B)(2), if the preliminary plat includes a dedication of a public park with an area of less than two acres and the donor has designated that the park be named in honor of a deceased individual of good character, the city shall adopt the designated name.

Staff Finding: The proposed development does not propose the dedication of a public park. This standard does not apply.

25. Pursuant to MICC 19.08.130(C)(1), where the project may adversely impact the health, safety, and welfare of, or inflict expense or damage upon, residents or property owners within or adjoining the project, other members of the public, the state, the city, or other municipal corporations due to flooding, drainage problems, critical slopes, unstable soils, traffic access, public safety problems, or other causes, the city council in the case of a long subdivision, or the code official in the case of a short subdivision, shall require the applicant to adequately control such hazards or give adequate security for damages that may result from the project, or both.

Staff Finding: The City of Mercer Island Public Works/Operation Department conducted a review of the preliminary engineering plan **(Exhibit 22)**, which includes a temporary erosion and sediment control plan, and will identify applicable stormwater mitigation measures at the time of building permit review. If these measures are implemented as required, potential flooding or drainage problems would be adequately controlled.

Staff Finding: Construction of the proposed development will be required to comply with all applicable drainage design, building and engineering standards in place at the time of permit application, addressing potential erosion hazards. Compliance with fire code standards will occur during building permit review of future structures, and a condition of approval, reflecting this requirement has been added to this decision.

26. Pursuant to MICC 19.08.130(C)(2), if there are soils or drainage problems, the city engineer may require that a Washington registered geotechnical engineer perform a geotechnical investigation of each lot in the project. The report shall recommend corrective action likely to prevent damage to the areas where such soils or drainage problems exist. Storm water shall be managed in accordance with Chapter 15.09 MICC and shall not increase likely damage to downstream or upstream facilities or properties.

Staff Finding: The City of Mercer Island Public Works/Operation Department conducted a review of the preliminary short subdivision and provided a condition that the new storm drainage systems for the lots resulting from the short subdivision shall be designed according to MICC 15.09. As conditioned, this standard is met.

27. Pursuant to MICC 19.08.030(C)(3), alternative tightline storm drains to Lake Washington shall not cause added impact to the properties, and the applicant shall submit supportive calculations for storm drainage detention.

Staff Finding: The applicant is not proposing to tightline storm drains to Lake Washington. This standard does not apply.

28. Pursuant to MICC 19.08.030(D)(1), the width and location of rights-of-way for major, secondary, and collector arterial streets shall be as set forth in the comprehensive arterial plan.

Staff Finding: 90th Avenue SE is classified as a local street. No additional public right-of-way is proposed to be dedicated as part of the proposed development. This standard does not apply.

29. Pursuant to MICC 19.08.030(D)(2), public rights-of-way shall comply with the requirements set out in MICC 19.09.030.

Staff Finding: No additional public right-of-way is proposed to be dedicated as part of the proposed development. This standard does not apply.

30. Pursuant to MICC 19.08.030(D)(3), Private access roads shall meet the criteria set out in MICC 19.09.040.

Staff Finding: Lots 1 through 4 of the of the proposed development will share a private access road. MICC 19.09.040(B) requires all private access roads serving three or more single-family dwellings to be at least 20 feet in width. **Exhibit 5** shows that the proposed access road is to be 20 feet in width, therefore, this standard is met.

Staff Finding: The proposed development was reviewed by the City's Fire Marshal to ensure the proposed development meets the current adopted code standards in relation to the International Fire Code and amendments listed under MICC 17.07.020.

Staff Finding: The proposed development is accessed by a shared private access driveway that is consistent with the required width and slope criteria set out in MICC 19.09.040.

31. Pursuant to MICC 19.08.030(D)(4), Streets of the proposed development shall connect with existing improved public streets, or with existing improved private access roads subject to easements of way in favor of the land to be subdivided.

Staff Finding: Lots 1 through 4 are proposed to gain access from 90th Avenue SE from a shared private access road across the parent lot. As proposed, this standard is met.

32. Pursuant to MICC 19.08.030(E)(1), the area, width, and depth of each residential lot shall conform to the requirements for the zone in which the lot is located. Any lot which is located in two or more zones shall conform to the zoning requirements determined by the criteria set out in MICC 19.01.040(G)(2).

Staff Finding: The proposed residential lots conform to the area, width, and depth requirements for the zone in which the lot is located (R-8.4) as shown in MICC 19.02.020(A), as summarized in the table below and illustrated in **Exhibit 5**:

	Net Lot Area	**Lot Width**	**Lot Depth**
Standard in MICC 19.02.020(A)	8,400 square feet	60 feet	80 feet
Lot 1	10,390 square feet	104.24 feet	100.01 feet
Lot 2	10,376 square feet	103.76 feet	100 feet
Lot 3	10,220 square feet	100 feet	102.20 feet

Lot 4	10,180 square feet	100 feet	100.8 feet

33. Pursuant to MICC 19.08.030(E)(2), each side line of a lot shall be approximately perpendicular or radial to the center line of the street on which the lot fronts.

Staff Finding: Lots 1 and 2 are corner lots, however the lots abut Island Crest Way on the west which is classified as a Collector Arterial. MICC 19.08.030(F)(1) requires the lots to be oriented so the rear or side portion of the lots abut the arterial. The proposed side yards of Lots 1 and 2 are perpendicular to the center line of the proposed access easement; therefore, this requirement is met.

Staff Finding: Lots 3 and 4 are accessed from a shared driveway off 90th Avenue SE. The proposed side lot lines are perpendicular to the center line of 90th Avenue SE; therefore, this requirement is met.

34. Pursuant to MICC 19.08.030(E)(3), The proposed development shall identify the location of building pads for each proposed lot pursuant to MICC 19.09.090. No cross-section dimension of a designated building pad shall be less than 20-feet in width.

Staff Finding: Building pads, with no cross section less than 20-feet in width, are shown on the proposed development plan set **(Exhibit 5)**. The proposed building pad locations minimize the disturbance of the existing, natural topography.

35. Pursuant to MICC 19.08.030(E)(4), the proposed development shall incorporate preferred development practices pursuant to MICC 19.09.100 where feasible. MICC 19.09.100 requires developers to incorporate the following development practices where feasible:

A. Use common access drives and utility corridors.

Staff Finding: The preliminary Plan Set (**Exhibit 5**) indicates that all four lots of the short subdivision are proposed to use a common, shared driveway to access the lots from 90th Avenue SE. **Exhibit 5** also shows that all four lots will use common utility corridors that pass through the access easement. As proposed, this standard is met.

B. Development, including roads, walkways and parking areas in critical areas, should be avoided, or if not avoided, adverse impacts to critical areas will be mitigated to the greatest extent reasonably feasible.

Staff Finding: The City of Mercer Island's GIS shows that the westernmost portion of the lot is constrained by geologically hazardous areas. The proposed access easement is not proposed within this area. Any impacts to geologically hazardous areas will be required to be addressed during the development proposals for the subdivided lots, therefore, this standard is met, as conditioned.

C. Retaining walls should be designed to minimize grading, including the placement of fill, on or near an existing natural slope.

Staff Finding: Retaining walls have not been proposed at this phase of development. If retaining walls are proposed in the future, they should be designed to minimize grading on or near an existing natural slope if feasible.

36. Pursuant to 19.08.030(E)(5), the proposed subdivision shall be designed to comply with the provisions of Chapter 19.10 MICC.

Staff Finding: This proposal has been reviewed by the City Arborist for compliance with Chapter 19.10 MICC. The City Arborist has indicated that tree retention is required for this development

proposal under MICC 19.10.060(A)(1)(c) and that trees marked for retention on the preliminary short plat may not be removed unless otherwise approved by the City Arborist. As conditioned, the proposed development is consistent with Chapter 19.10 MICC.

37. Pursuant to 19.08.030(F)(1), subdivisions abutting an arterial street as shown on the comprehensive arterial plan shall be oriented to require the rear or side portion of the lots to abut the arterial and provide for internal access streets.

Staff Finding: The lot to be subdivided abuts Island Crest Way, which is classified as a Collector Arterial in the Comprehensive Arterial Plan. Lots 1 and 2 are oriented to require the side portion of the lots to abut the arterial. An internal access easement is proposed from 90th Avenue SE. Access is not proposed from Island Crest Way; therefore, this requirement is met.

38. Pursuant to 19.08.030(F)(2), Where critical areas meeting the criteria set out in Chapter 19.07 MICC are present within the subdivision, the code official or city council may:

i. Require that certain portions of the long subdivision or short subdivision remain undeveloped with such restrictions shown on the official documents;

ii. Increase the usual building set-back requirements; and/or

iii. Require appropriate building techniques to reduce the impact of the site development.

Staff Finding: The City of Mercer Island GIS shows geologically hazardous areas to be present on the westernmost portion of the subject property. Impacts to the area will be addressed during future development permits for any proposed alterations to the geologically hazardous areas.

39. Pursuant to Chapter 19.17 MICC, Chapter 19.18 MICC, and Chapter 19.19 MICC the City shall collect impact fees, based on the City's permit and impact fee schedule, from any Applicant seeking a residential building permit from the City.[…] For building permits within new subdivisions approved under Chapter 19.08 MICC (Subdivisions), a credit shall be applied for any dwelling unit that exists on the land within the subdivision prior to the subdivision if the dwelling unit is demolished. The credit shall apply to the first complete building permit application submitted to the city subsequent to the demolition of the existing dwelling unit, unless otherwise allocated by the Applicant of the subdivision as part of the approval of the subdivision.

Staff Finding: The City does not collect school impact fees as requested by the Mercer Island School District. Additional impact fees would be assessed during future building permit applications for proposed development on vacant lots.

VIII. CONCLUSIONS OF LAW

Based on the above Findings of Fact, the following Conclusions of Law have been made:

1. The proposed short subdivision is consistent with, and therefore would comply with, the arterial, capital facility, and land use elements of the Comprehensive Plan. Additionally, the proposed short subdivision would be consistent with, and therefore comply with all other chapters of the development code, the Shoreline Management Act, and other applicable regulations, subject to the conditions of approval.
2. The use of this property is residential, which is a permitted use in the underlying zone. The residential proposal in the underlying zone is consistent with the adopted current and official Comprehensive Plan land use element, and plans for arterial streets, trails, public facilities, utilities, parks and playgrounds, subject to the conditions of approval.
3. The public health and welfare will be served by the approval of the project because it will provide additional housing to meet the City's growth management targets and provide improved drainage along

the adjacent right-of-way. The residential proposal does not create any adverse impacts to health, safety or welfare or inflict damage to adjacent properties or the public interests for flooding, drainage, slopes, unstable soils, traffic, public safety or other causes, subject to the conditions of approval.

4. The proposed short plat is consistent with the requirement for streets, roads, and rights-of-way if the requirements of the City of Mercer Island Engineering Department are met for this short plat.
5. The proposal meets the minimum lot area, width, and depth of each residential lot for the zone in which the lots are located, and complies with all applicable zoning regulations.
6. Appropriate provisions are made for the public health, safety, and general welfare and for such open spaces, drainage ways, streets or roads, alleys, other public ways, transit stops, potable water supplies, sanitary wastes, parks and recreation, playgrounds, schools and school grounds and all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school; and (b) the public use and interest will be served by the platting of such subdivision and dedication.

IX. CONDITIONS OF APPROVAL

The following conditions shall be binding on the "Applicant," which shall include the owner or owners of the property, heirs, assign and successors.

General

1. The final plat shall be designed substantially in conformance with the preliminary plat of record submitted as part of this short plat application, **Exhibit 5**, and as required to be amended by the Conditions of Approval.
2. The proposed and future development of this property shall comply with the zoning district or as amended at the time of development.
3. The removal of native vegetation is to be minimized and limited to active construction areas.
4. The applicant has five years to submit a final short plat meeting all requirements of the Conditions of Approval. A short plat that has not been recorded within five years after its preliminary approval shall expire, becoming null and void.
5. Land contained in the short subdivision may not be further divided in any manner for a period of five years after the recording of the final plat with King County without the filing of a long subdivision plat; however, an alteration to the short subdivision is permitted so long as no more than four lots are created through the total short subdivision process.
6. The future and proposed development of this property shall comply with the standards in MICC 19.07, Environment.
7. The following note shall be shown on the face of the plat:
    a. Lots 1, 2, 3, and 4 shall use the proposed shared access and utility tract to access 90th Avenue SE and to connect to city utilities.
    b. All buildings are subject to meeting current fire core requirements at the time of a complete building permit submittal, including fire apparatus access as outlined in code sections of the International Fire Core Appendix D. Fire plan reviews will be conducted at the time of building permit submittal and may require additional fire protection systems and/or additional fire prevention measures for building permit approval.

Arborist

8. No tree identified for retention may be removed unless otherwise approved by the City Arborist.
9. The tree retention plan on Sheet TR-01 of **Exhibit 5** and the Tree Inventory Worksheet (**Exhibit 10**) shall be updated to include trees 14 and 23 which were removed prior to the development application for the short subdivision over the rolling five-year period, as described in MICC 19.10.060(A)(5).

Engineering

10. Show all the existing and proposed easements on the final plat. Clearly indicate that all easements are private easements.
11. Easements for shared access, utilities and storm drainage facilities shall be depicted on the face of the final short plat. Language which indicates joint rights and responsibilities of each lot with respect to all utilities and roadways shall be shown along with individual lot Joint Maintenance Easement Agreements (where applicable) for all shared usage and filed with the King County Recorder and noted on the final short plat. The easement shall indicate whether it is public or private, existing, or proposed.
12. Damage to adjacent properties or public rights-of-way resulting from construction (e.g., siltation, mud, runoff, roadway damage caused by construction equipment or hauling) shall be expeditiously mitigated and repaired by the contractor, at no expense to the City. Failure to mitigate and repair said damage, or to comply with the approved construction plans, the permits issued by the City, or the City requirement for corrective action may be cause for the issuance of a "Stop Work" order, foreclosure on the plat bond/security, and/or other measures deemed appropriate by the City Engineer or Code Official to ensure construction consistent with the approved plans and protection of public safety.
13. The final short plat shall be prepared in conformance with Title 58 RCW and surveys shall comply with Chapter 332-130 WAC. The final short plat shall be submitted using Mercer Island's datum and be tied to at least two City monuments.
14. A City of Mercer Island title block for approval signatures (Planner and City Engineer) shall be provided on the final plat along with the designated short plat number.
15. Construction of all improvements for access, utilities, storm drainage, and site work shall comply with current City ordinances and standards.
16. All utilities serving the short plat shall be undergrounded (MICC 19.08.040) and shall be designed and constructed in accordance with City of Mercer Island Ordinances.
17. Short plat improvement plans prepared by a Washington State licensed engineer shall be submitted for review and approval by the City Engineer. The improvement plans shall include the following:
    a. Short plat access road – Comply with the Fire Code requirements and standards contained in MICC 19.09.040.
    b. Temporary erosion control measures.
    c. Grading plan.
    d. Water main, water meters, and appurtenances.
        i. Provide water services for each lot. Locate water meters outside of the future driveway areas and any paved areas.
        ii. Abandon all existing water services currently serving the existing lot at the City water main.

e. Sanitary sewer and appurtenances.

   i. Provide sewer connections for each lot. Show the sanitary sewer stub outs for each lot.

   ii. The side sewer for all lots shall be a shared side sewer with one single connection to the city sewer main.

   iii. The sanitary sewer system serving all lots will be a private sewer system.

f. Stormwater.

   i. Provide drainage improvements in compliance with MICC 15.09.

   ii. Show the storm drainage stub outs for all lots.

   iii. The existing drainage ditch along 90th Ave SE shall be piped.

g. Dry utilities.

   i. Show the proposed dry (power, gas, etc.) utility corridor on the plan.

18. Right-of-Way Restoration and roadway replacement limits shall be determined by the City Engineer prior to final inspection of the Site Development Permit.

19. All plat improvements shall be completed prior to final short plat approval and prior to issuance of building permits. A survey grade as-built drawing in PDF format that shows all utilities and plat improvements shall be submitted to the City Engineer upon completion of the work.

20. The following notes shall be shown on the face of the plat:

    a. Maintenance and repair of the private sanitary sewer system and joint use side sewers (sewer lines from the building to the private sewer main), shared roads, access easements, public trail, private storm drainage facilities shall be the responsibility of the owners of each lot served (with the exception that owners of any lot which is lower in elevation shall not be responsible for that portion of a private side sewer above their connection). If maintenance and repair of any facilities enumerated above are not performed to the satisfaction of the City Engineer, after a timely demand has been made for such action, the City or its agent shall have the right to enter upon the premises and perform the necessary maintenance and repair to protect the safety and general welfare of the public and shall have the right to charge the owner of each lot an equal share of the total maintenance and repair costs. The City or the owner of any lot within this short plat shall have the right to bring action in Superior Court to require any maintenance or repair and to recover the costs incurred in making or effecting repairs to improvements.

    b. Private stormwater facilities shall be inspected and maintained in conformance with MICC 15.09.070.

    c. All staging for construction shall occur on site and shall not be located in the public right-of-way.

    d. No permanent landscaping, structures, or fences shall be placed on or within public utility, storm drainage, or pedestrian path easements without written approval of the City Engineer.

    e. If, in the opinion of the City Engineer, utilities or storm drainage facilities require maintenance, repair, or replacement, the City or its agent shall have the right to enter those lots adjoining the facility for the purpose of maintaining, repairing, relocating, or replacing said facilities.

f. Installation of landscaping and/or structures including trees, shrubs, rocks, berms, walls, gates, and other improvements are not allowed within the public right-of-way without an approved encroachment agreement from the City prior to the work occurring (MICC 19.06.060).

DECISION

Based upon the above noted Findings of Fact and Conclusions of Law, Preliminary Short Subdivision application SUB22-009, as depicted in **Exhibit 5**, is hereby **APPROVED** with conditions. This decision is final, unless appealed in writing consistent with adopted appeal procedures, MICC 19.15.130, and all other applicable appeal regulations.

Approved this 12th day of February, 2024

Molly McGuire

_____

Molly McGuire

Planner

Community Planning & Development

City of Mercer Island

If you desire to file an appeal, you must submit the appropriate form, available from the department of Community Planning and Development, and file it with the City Clerk within fourteen (14) days from the date after the notice of decision is made available to the public and applicant pursuant to MICC 19.15.120. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were materially affected by irregularities in procedure, the decision was unsupported by material and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

Please note that the City will provide notice of this decision to the King County Department of Assessment, as required by State Law (RCW 36.70B.130). Pursuant to RCW 84.41.030(1), affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation by contacting the King County Department of Assessment at (206) 296-7300.

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercerisland.gov

CITY USE ONLY		
PROJECT#	RECEIPT #	**FEE**
Date Received:		
Received By:		

DEVELOPMENT APPLICATION

STREET ADDRESS/LOCATION	ZONE
4833 90th Ave SE	R-8.5
COUNTY ASSESSOR PARCEL #'S	**PARCEL SIZE (SQ. FT.)**
4351300487	41,165.0

PROPERTY OWNER *(required)*	ADDRESS *(required)*	CELL/OFFICE *(required)*
Home-Link Capital LLC	7683 SE 27th St, #186, Mercer Island, WA, 98040	(206) 265 - 0810 E-MAIL *(required)* adisoncui@outlook.com
PROJECT CONTACT NAME	ADDRESS	CELL/OFFICE
Mr. Jintao (Adison) Cui	7683 SE 27th St, #186, Mercer Island, WA, 98040	(206) 265 - 0810 E-MAIL adisoncui@outlook.com
TENANT NAME	ADDRESS	CELL PHONE E-MAIL

DECLARATION: I HEREBY STATE THAT I AM THE OWNER OF THE SUBJECT PROPERTY OR I HAVE BEEN AUTHORIZED BY THE OWNER(S) OF THE SUBJECT PROPERTY TO REPRESENT THIS APPLICATION, AND THAT THE INFORMATION FURNISHED BY ME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

SIGNATURE

Sep/30/2022
DATE

PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL (PLEASE USE ADDITIONAL PAPER IF NEEDED)**:**

Creation of New 4 Residential Lots

ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

CHECK TYPE OF LAND USE APPROVAL REQUESTED:

CRITICAL AREAS	ENVIRONMENTAL REVIEW (SEPA)	SUBDIVISION
☐ Critical Area Review 1	☐ SEPA Review	☑ Short Plat- Preliminary
☐ Critical Area Review 2	☐ Environmental Impact Statement	☐ Short Plat- Alteration
		☐ Short Plat- Final Plat
DESIGN REVIEW		☐ Long Plat- Preliminary
☐ Design Review – Signs	**LEGISLATIVE**	☐ Long Plat- Alteration
☐ Design Review – Code Official	☐ Code Amendment	☐ Long Plat- Final Plat
☐ Design Commission Study Session	☐ Comprehensive Plan Docket Application	☐ Lot Line Revision
☐ Design Commission Review – Exterior Alteration	☐ Comprehensive Plan Application (If Docketed) ☐ Rezone	
☐ Design Commission Review – Major New Construction		
	OTHER LAND USE	
	☐ Accessory Dwelling Unit	
DEVIATIONS	☐ Code Interpretation Request	
☐ Deviations to Antenna Standards – Code Official	☐ Conditional Use (CUP) ☐ Noise Exception Type I - IV	**WIRELESS COMMUNICATION FACILITIES** ☐ New Wireless Communication Facility
☐ Deviations to Antenna Standards – Design Commission	☐ Other Permit/Services Not Listed	☐ Wireless Communications Facilities- 6409 Exemption
☐ Public Agency Exception	**SHORELINE MANAGEMENT**	☐ Small Cell Deployment
☐ Reasonable Use Exception	☐ Shoreline Exemption	☐ Height Variance
☐ Variance	☐ Shoreline Substantial Development Permit	
☐ Seasonal Development Limitation Waiver – Wet Season Construction Approval	☐ Shoreline Variance ☐ Shoreline Conditional Use Permit ☐ Shoreline Permit Revision	

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | http://www.mercerisland.gov/

PUBLIC NOTICE OF APPLICATION

NOTICE IS HEREBY GIVEN for the application described below:

File No.:	SUB22-009
Permit Type:	Type III
Description of Request:	A request for preliminary short subdivision to divide an existing lot into four new lots.
Applicant / Owner:	Jintao (Adison) Cui / Home-Link Capital LLC
Location of Property:	7216 93rd Ave SE, Mercer Island WA 98040 Identified by King County Assessor tax parcel number: 258190-0210
SEPA Compliance:	This project is exempt from SEPA pursuant to WAC 197-11-800(6)(d).
Project Documents:	Please follow this file path to access the associated documents for this project: https://mieplan.mercergov.org/public/SUB22-009
Written Comments:	**This may be the only opportunity to comment on the environmental impacts of the proposal.** Written comments on this proposal may be submitted to the City of Mercer Island either by email, in person, or by mail to the City of Mercer Island, 9611 SE 36th Street, Mercer Island, WA 98040-3732. Anyone may comment on the application, receive notice, and request a copy of the decision once made. Only those persons who submit written comments or participate at the public hearing (if a hearing is required) will be parties of record; and only parties of record will have the right to appeal.
Public Hearing and Public Meeting:	Pursuant to MICC 19.15.030 Table A and B a public hearing is not required for Type I-III permits.
Applicable Development Regulations	Applications for Preliminary Short Subdivisions are required to be processed as Type III land use reviews pursuant to Mercer Island City Code (MICC) 19.15.030. Processing requirements for Type III land use reviews are further detailed in MICC 19.15.030. The city's subdivision requirements are contained in Chapter 19.08 MICC.
Other Associated Permits:	TCC22-024.
Environmental Documents:	Copies of all studies and / or environmental documents are available through the above project documents link.

Application Process Information:	Date of Application: November 16, 2022 Determined to Be Complete: December 23, 2022 Bulletin Notice: January 3, 2023 Date Mailed: January 3, 2023 Date Posted on Site: January 3, 2023 Comment Period Ends: 5:00PM on February 2, 2023

Project Contact:
Andrew Leon / Planner
Community Planning & Development
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275-7720
andrew.leon@mercerisland.gov

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | http://www.mercerisland.gov/

REVISED PUBLIC NOTICE OF APPLICATION

NOTICE IS HEREBY GIVEN for the application described below:

File No.:	SUB22-009
Permit Type:	Type III
Description of Request:	A request for preliminary short subdivision to divide an existing lot into four new lots.
Applicant / Owner:	Jintao (Adison) Cui / Home-Link Capital LLC
Location of Property:	4833 90th Ave SE, Mercer Island WA 98040 Identified by King County Assessor tax parcel number:
SEPA Compliance:	This project is exempt from SEPA pursuant to WAC 197-11-800(6)(d).
Project Documents:	Please follow this file path to access the associated documents for this project: https://mieplan.mercergov.org/public/SUB22-009
Written Comments:	**This may be the only opportunity to comment on the environmental impacts of the proposal.** Written comments on this proposal may be submitted to the City of Mercer Island either by email, in person, or by mail to the City of Mercer Island, 9611 SE 36th Street, Mercer Island, WA 98040-3732. Anyone may comment on the application, receive notice, and request a copy of the decision once made. Only those persons who submit written comments or participate at the public hearing (if a hearing is required) will be parties of record; and only parties of record will have the right to appeal.
Public Hearing and Public Meeting:	Pursuant to MICC 19.15.030 Table A and B a public hearing is not required for Type I-III permits.
Applicable Development Regulations	Applications for Preliminary Short Subdivisions are required to be processed as Type III land use reviews pursuant to Mercer Island City Code (MICC) 19.15.030. Processing requirements for Type III land use reviews are further detailed in MICC 19.15.030. The city's subdivision requirements are contained in Chapter 19.08 MICC.
Other Associated Permits:	TCC22-024.
Environmental Documents:	Copies of all studies and / or environmental documents are available through the above project documents link.

Application Process Information:	Date of Application: November 16, 2022 Determined to Be Complete: December 23, 2022 First Bulletin Notice: January 3, 2023 First Date Mailed: January 3, 2023 First Date Posted on Site: January 3, 2023 Revised Bulletin Notice: January 9, 2023 Revised Date Mailed: January 9, 2023 Revised Date Posted on Site: January 9, 2023 Comment Period Ends: 5:00PM on February 8, 2023

Project Contact:
Andrew Leon / Planner
Community Planning & Development
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275-7720
andrew.leon@mercerisland.gov

SEC. 19, T 24 N, R 5E, W.M.
Project 4833 MI
Preliminary 4 - Lot Short Plat

MATTERS OF RECORD:

THE HEREIN DESCRIBED PROPERTY IS SUBJECT TO THE FOLLOWING EASEMENTS AND ENCUMBRANCES OF RECORD:

1. *COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS EASEMENTS AND OTHER TERMS AND CONDITIONS SHOWN ON LINDLEY ADDITION TO SEATTLE PER RECORDING NO. 32487*
2. *RIGHT TO MAKE NECESSARY SLOPES FOR CUTS AND FILLS FOR FRANK W. FLOOD ROAD RECORDED IN VOLUME 29 ON PAGE 345 OF COMMISSIONER'S RECORDS.*
3. *EASEMENT FOR WATER PIPELINE AND WATER SERVICE PER RECORDING NO. 3766695 (EXACT LOCATION IS NOT SPECIFIED).*
4. *RIGHT TO MAKE NECESSARY SLOPES FOR CUTS AND FILLS PER RECORDING NO'S 4793511 AND 5056292.*
5. *EASEMENT CONDEMNED IN KING COUNTY SUPERIOR COURT AND THE TERMS AND CONDITIONS THEREOF FOR ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINES PER CAUSE NO. 679116.*
6. *EASEMENT CONDEMNED IN KING COUNTY SUPERIOR COURT AND THE TERMS AND CONDITIONS THEREOF FOR WATER PIPELINES PER CAUSE NO. 679116 (EXACT LOCATION IS NOT SPECIFIED).*
7. *DECREE OF APPROPRIATION ENTERED IN KING COUNTY CAUSE NO. 541679 AND THE TERMS AND CONDITIONS THEREOF PER RECORDING NO. 5150805.*
8. *EASEMENT FOR PUGET SOUND POWER AND LIGHT COMPANY GUY WIRE AND ANCHOR PER RECORDING NO. 6258135.*
9. *NOTICE OF ADDITIONAL TAP AND CONNECTION CHARGES AND THE TERMS AND CONDITIONS THEREOF PER RECORDING NO. 7712060812.*
10. *COVENANTS, CONDITIONS RESTRICTIONS, RECITALS, EASEMENTS AND OTHER TERMS AND CONDITIONS SHOWN ON MERCER ISLAND LOT LINE REVISION SUB15-018 PER RECORDING NO. 20160519900008.*

LEGAL DESCRIPTION:

THE NORTH 200 FEET OF THE SOUTH 400 FEET OF VACATED BLOCK 4, LINDLEY ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 103, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED 90TH AVENUE ADJOINING PURSUANT TO KING COUNTY SUPERIOR COURT CAUSE NO. 679116.

EXCEPT THE WEST 10 FEET THEREOF CONVEYED TO KING COUNTY FOR ROAD BY DEEDS RECORDED UNDER RECORDING NO. 5056292 AND RECORDING NO. 4793511.

AND EXCEPT THAT PORTION THEREOF APPROPRIATED IN KING COUNTY SUPERIOR COURT CAUSE NO. 541679, RECORDED UNDER RECORDING NO. 4793511.

REFERENCE SURVEYS:

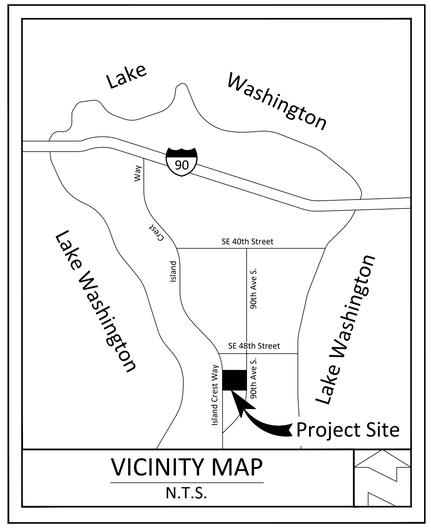
R1. PLAT OF LINDLEY ADDITION TO SEATTLE, VOL. 3 PG. 103.

R2. MERCER ISLAND SHORT PLAT SUB12-0006, REC. NO. 20131220900005.

R3. MERCER ISLAND BOUNDARY LINE REVISION, REC. NO. 20160519900008.

TOPOGRAPHY SURVEY NOTES:

1. *BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK WSRN).*
2. *ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.*
3. *FIELD WORK WAS DONE IN MARCH OF 2022 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.*
4. *THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BASE MAP FOR CIVIL ENGINEERING DESIGN.*
5. *THE CONTOURS SHOWN ARE DERIVED FROM DIRECT FIELD OBSERVATIONS. THE CONTOUR INTERVAL IS 2.0 FEET AND THE CONTOUR ACCURACY IS ONE HALF OF THE INTERVAL (±1.0 FEET).*
6. *PROPERTY LINES SHOWN ARE BASED ON A FIELD SURVEY.*
7. *THE LEGAL DESCRIPTION AND MATTERS OF RECORD ARE TAKEN FROM FIDELITY NATIONAL TITLE INSURANCE COMPANY, CERTIFICATE NUMBER 611311326, DATED FEBRUARY 10, 2022 AT 8:00 AM.*
8. *THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC, AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.*



Applicant / Project Owner

Mr. Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
(206) 265 - 0810
adisoncui@outlook.com

SHEETS INDEX

C - 1.0	Cover Sheet Plan.
C - 2.0	Existing Site Conditions Plan.
C - 3.0	Existing Parcel Map Plan.
C - 4.0	Preliminary Short Plat Map Plan.
C - 5.0	TESC Plan.
C - 6.0	Developed Site Conditions Map Plan.
C - 7.0	Preliminary Grading, Drainage, and Utilities Plan.

Existing Site Data:

Parcel Number: *4351300487*
Parcel Address: *4833 90th Ave. SE, Mercer Island, WA 98040*
Zoning: *R - 8.5*
Total Parcel Area (per survey): 41,165 s.f. = 0.945 Acre

Total Existing Impervious Surfaces = 5,862.0 sf
Percentage of Existing Impervious Surfaces = 14.2 %
Total Existing Pervious Surfaces = Grass 4,632.0 sf + Forest 30,671.0 sf = 35,303.0 sf
Percentage of Existing Pervious Surfaces = 85.8 %

Zoning Requirements:

Min. Lot Width Required:	*60'*
Min. Lot Depth Required:	*80'*
Min. Lot Area Required:	*8,400 s.f.*
Max. Lot Coverage:	*40%*
Required Landscape:	*60%*
Required Front Yard Setback:	*20'*
Required Rear Yard Setback:	*25'*
Minimum Side Yard Setback:	*7.5'*
Minimum Total Side Yard Setback:	*15'*

Project Description:

Proposed Residential 4 Lot Short Plat

Property Owner:

Mr. Jintao (Adison) Cui
Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

Project Contact:

Mr. Jintao (Adison) Cui
Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

NOTES

See detailed project information and detailed area calculations on sheet C - 6.0

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Cover Sheet Plan

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
Permit Expediting Services · Inspection Services · Expert Witness
Bellevue, WA - www.pacificlandwa.com
info@pacificlandwa.com · (425) 615 - 6160

THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF PACIFIC LAND ENGINEERING, INC. AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PACIFIC LAND ENGINEERING, INC AND IS NOT TO BE CHANGED OR COPIED.

MAZEN S. HAIDAR — STATE OF WASHINGTON — 36034 — REGISTERED PROFESSIONAL ENGINEER

Date: 01 / 10 / 2024
STAMP IS NOT VALID UNLESS SIGNED AND DATED

Job Number:
220520 - PLE - 2211

DWG Date:
01 / 10 / 2024

Sheet No.
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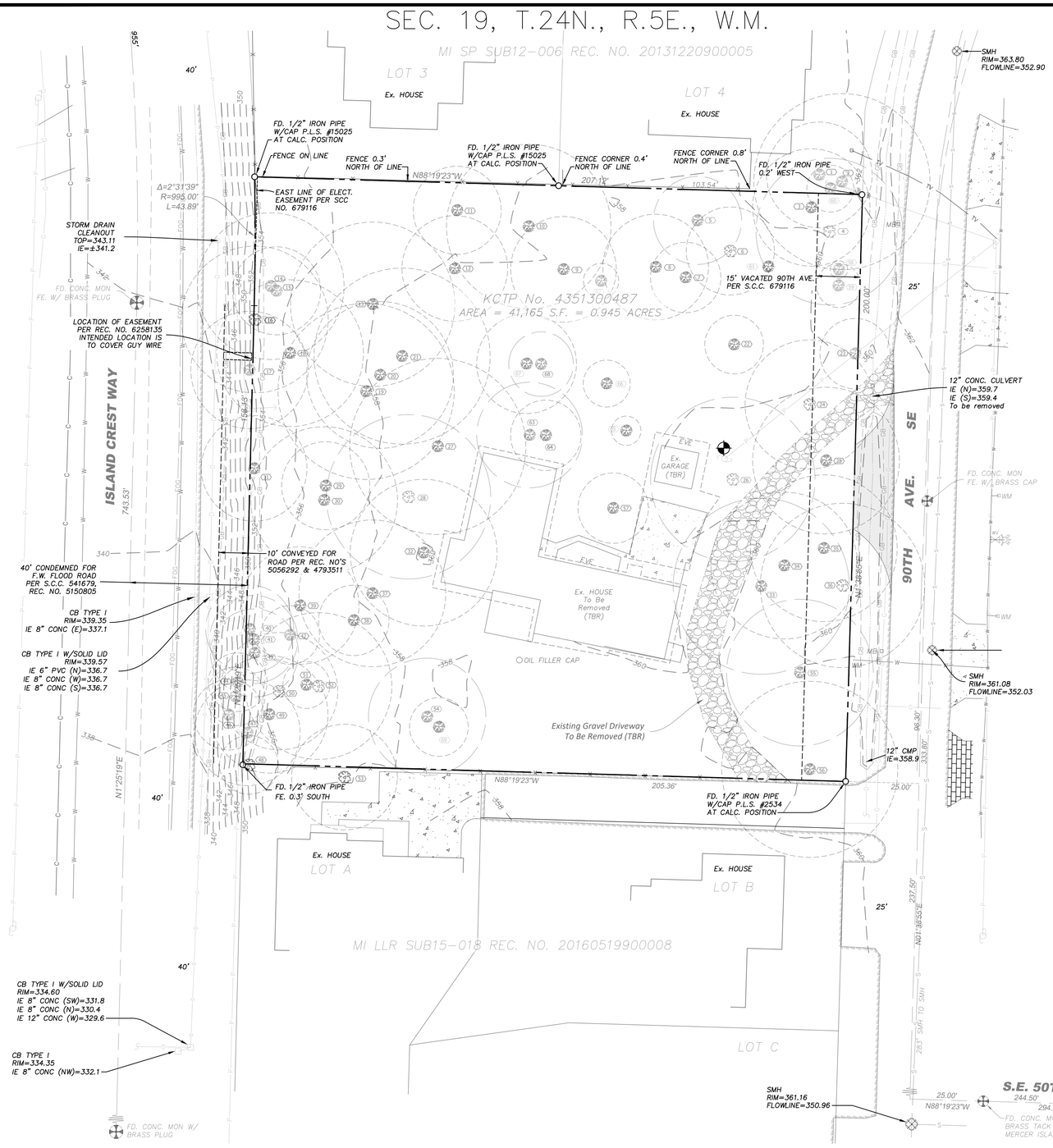
OF
C - 7.0



20' 0' 20' 40'

SCALE : 1" = 20'

LEGEND:

- = POWER POLE
- = GUY POLE
- = GUY ANCHOR
- = OVERHEAD POWER
- = FIRE HYDRANT
- = WATER VALVE
- = WATER METER
- = WATER LINE (PAINTED LOCATION)
- = UNDERGROUND COMMUNICATION (PAINTED LOCATION)
- = TELEVISION RISER
- = UNDERGROUND TELEVISION (PAINTED LOCATION)
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Property Owner:

Mr. Jintao (Adison) Cui
Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

Project Contact:

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Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

Existing Site Data:

Parcel Number: 4351300487
Parcel Address: 4833 90th Ave. SE
Mercer Island, WA 98040
Zoning: R - 8.5
Total Parcel Area (per survey): 41,165 s.f. = 0.945 Acre

Total Existing Impervious Surfaces = 5,862.0 sf
Percentage of Existing Impervious Surfaces = 14.2 %
Total Existing Pervious Surfaces = Grass 4,632.0 sf +
Forest 30,671.0 sf = 35,303.0 sf
Percentage of Existing Pervious Surfaces = 85.8 %

Zoning Requirements:

Min. Lot Width Required:	60'
Min. Lot Depth Required:	80'
Min. Lot Area Required:	8,400 s.f.
Max. Lot Coverage:	40%
Required Landscape:	60%
Required Front Yard Setback:	20'
Required Rear Yard Setback:	25'
Minimum Side Yard Setback:	7.5'
Minimum Total Side Yard Setback:	15'

Existing Site Slope Calculations:

(Grade 330 - Grade 354) / 207' = 2.90 %

TOPOGRAPHY SURVEY NOTES:

1. BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK WSRN).
2. ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.
3. FIELD WORK WAS DONE IN MARCH OF 2022 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.
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7. THE LEGAL DESCRIPTION AND MATTERS OF RECORD ARE TAKEN FROM FIDELITY NATIONAL TITLE INSURANCE COMPANY, CERTIFICATE NUMBER 611311326, DATED FEBRUARY 10, 2022 AT 8:00 AM.
8. THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC, AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.

Call Before You Dig
811 OR 1-800-424-5555

REFERENCE SURVEYS:

R1. PLAT OF LINDLEY ADDITION TO SEATTLE, VOL. 3 PG. 103.

R2. MERCER ISLAND SHORT PLAT SUB12-0006, REC. NO. 20131220900005.

R3. MERCER ISLAND BOUNDARY LINE REVISION, REC. NO. 201605199000008.

MATTERS OF RECORD:

THE HEREIN DESCRIBED PROPERTY IS SUBJECT TO THE FOLLOWING EASEMENTS AND ENCUMBRANCES OF RECORD:

1. COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS EASEMENTS AND OTHER TERMS AND CONDITIONS SHOWN ON LINDLEY ADDITION TO SEATTLE PER RECORDING NO. 32487
2. RIGHT TO MAKE NECESSARY SLOPES FOR CUTS AND FILLS FOR FRANK W. FLOOD ROAD RECORDED IN VOLUME 29 ON PAGE 345 OF COMMISSIONER'S RECORDS.
3. EASEMENT FOR WATER PIPELINE AND WATER SERVICE PER RECORDING NO. 3766695 (EXACT LOCATION IS NOT SPECIFIED).
4. RIGHT TO MAKE NECESSARY SLOPES FOR CUTS AND FILLS PER RECORDING NO'S 4793511 AND 5056292.
5. EASEMENT CONDEMNED IN KING COUNTY SUPERIOR COURT AND THE TERMS AND CONDITIONS THEREOF FOR ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINES PER CAUSE NO. 679116.
6. EASEMENT CONDEMNED IN KING COUNTY SUPERIOR COURT AND THE TERMS AND CONDITIONS THEREOF FOR WATER PIPELINES PER CAUSE NO. 679116 (EXACT LOCATION IS NOT SPECIFIED).
7. DECREE OF APPROPRIATION ENTERED IN KING COUNTY CAUSE NO. 541679 AND THE TERMS AND CONDITIONS THEREOF PER RECORDING NO. 5150805.
8. EASEMENT FOR PUGET SOUND POWER AND LIGHT COMPANY GUY WIRE AND ANCHOR PER RECORDING NO. 6258135.
9. NOTICE OF ADDITIONAL TAP AND CONNECTION CHARGES AND THE TERMS AND CONDITIONS THEREOF PER RECORDING NO. 7712060812.
10. COVENANTS, CONDITIONS RESTRICTIONS, RECITALS, EASEMENTS AND OTHER TERMS AND CONDITIONS SHOWN ON MERCER ISLAND LOT LINE REVISION SUB15-018 PER RECORDING NO. 20160519900008.

LEGAL DESCRIPTION:

THE NORTH 200 FEET OF THE SOUTH 400 FEET OF VACATED BLOCK 4, LINDLEY ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 103, RECORDS OF KING COUNTY, WASHINGTON.

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AND EXCEPT THAT PORTION THEREOF APPROPRIATED IN KING COUNTY SUPERIOR COURT CAUSE NO. 541679, RECORDED UNDER RECORDING NO. 4793511.

SURVEYOR'S CERTIFICATE:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF HOME LINK CAPITAL LLC IM MARCH OF 2022

ROBERT J. BOGDON
CERTIFICATE NO. 33487

LEGAL DESCRIPTION:

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Mercer Island Fire Department

4160 86th Ave SE
Mercer Island, WA 98040
(206) 236 - 3330

Telephone and Cable

Comcast
P. O. Box 60533
City of Industry, CA 91716
(800) 934 - 6489

Project Engineer:

Mazen Haidar, PE
Pacific Land Engineering
mazen@pacificlandwa.com
(206) 615 - 6160

Project Surveyor:

Robert Bogdon, PLS
Eastside Consultants, Inc.
1320 N.W. Mall Street, Suite B
(425) 392 - 5351

Mercer Island School District

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Mercer Island, WA 98040
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Power and Gas Source

Puget Sound Energy (PSE)
P. O. Box 91269
Bellevue, WA 98009
(888) 321 - 7779

Water Purveyor

City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275 - 7602

Sewer Purveyor

King County
201 South Jackson Street
Seattle, WA 98104
(206) 296 - 1450

See Sheet C-2.1 for Trees Table

INDEX LOCATION
SEC. 19, T.24N., R.5E., W.M.

ROBERT J. BOGDON STATE OF WASHINGTON 33487 REGISTERED PROFESSIONAL LAND SURVEYOR

CALL 48 HOURS BEFORE YOU DIG 800-424-5555

ENGINEERS – SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 N.W. MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Existing Site Condition Plan

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
Permit Expediting Services · Inspection Services · Expert Witness
Bellevue, WA - www.pacificlandwa.com
info@pacificlandwa.com (425) 615 - 6160

THESE PLANS AND SPECIFICATIONS, AND/OR THE PROFESSIONAL SERVICES TO BE PERFORMED THEREUNDER, ARE AND SHALL REMAIN THE PROPERTY OF PACIFIC LAND ENGINEERING, INC. AND/OR THE PROFESSIONAL ENGINEER WHO PREPARED THEM. ANY UNAUTHORIZED USE OF THESE PLANS AND SPECIFICATIONS WITHOUT THE WRITTEN CONSENT OF PACIFIC LAND ENGINEERING, INC. IS PROHIBITED AND SHALL BE CONSIDERED AN INFRINGEMENT OF COPYRIGHT. THE LAND DEVELOPMENT ACTIVITIES SHOWN ON THESE PLANS MAY NOT BE USED OR OWNED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PACIFIC LAND ENGINEERING, INC. AND ITS LICENSED ENGINEER.

MAZEN S. HAIDAR STATE OF WASHINGTON 36034 REGISTERED PROFESSIONAL ENGINEER

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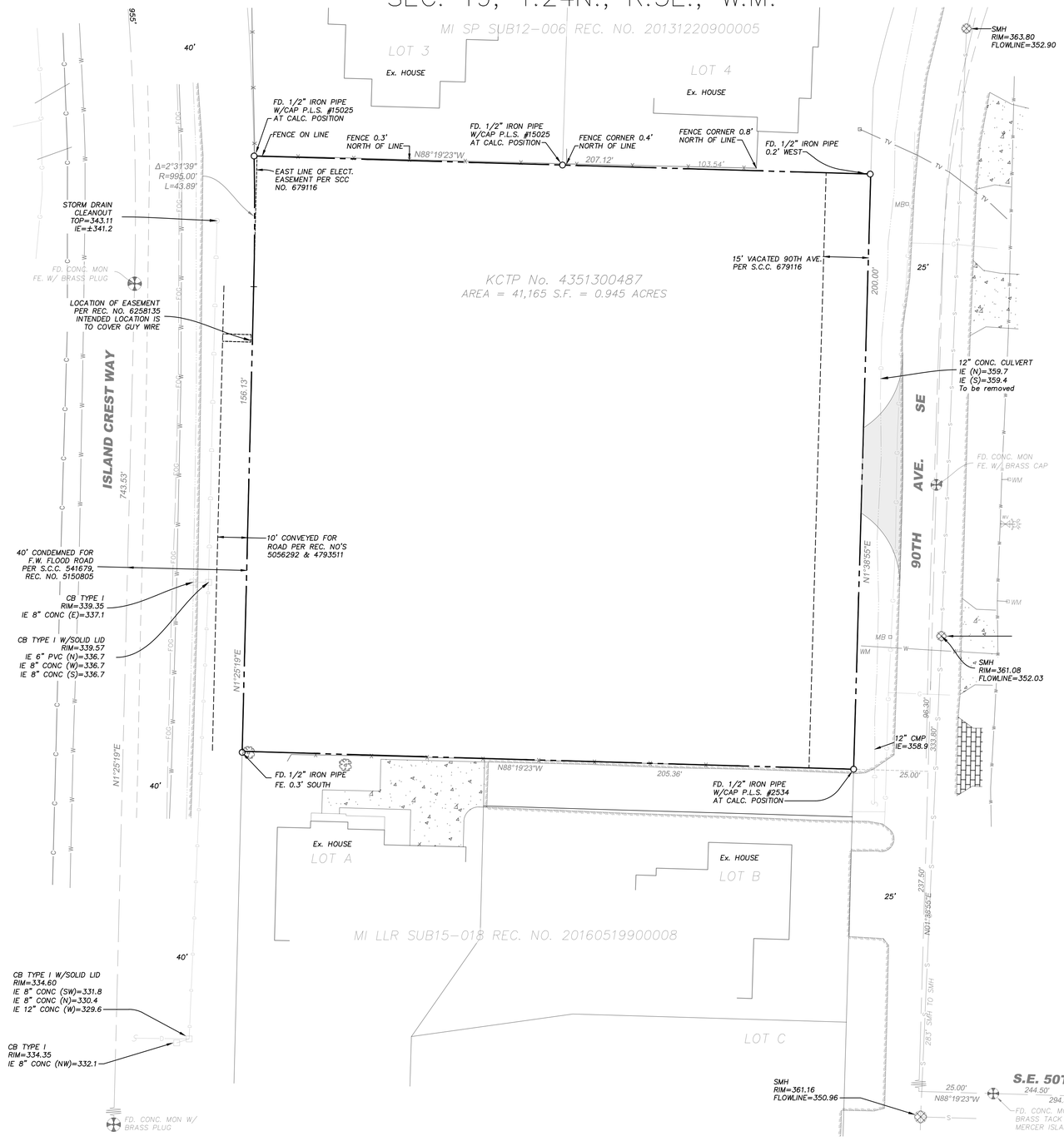

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CERTIFICATE NO. 33487

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Telephone and Cable

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P. O. Box 60533
City of Industry, CA 91716
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Sewer Purveyor

King County
201 South Jackson Street
Seattle, WA 98104
(206) 296 - 1450

See Sheet C-2.1 for Trees Table

INDEX LOCATION
SEC. 19, T.24N., R.5E., W.M.

19

ROBERT J. BOGDON
STATE OF WASHINGTON
33487
REGISTERED
PROFESSIONAL LAND SURVEYOR

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ENGINEERS – SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 N.W. MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Existing Parcel Map Plan

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
Permit Expediting Services · Inspection Services · Expert Witness
Bellevue, WA - www.pacificlandwa.com
info@pacificlandwa.com (425) 615 - 6160

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND PACIFIC LAND ENGINEERING, INC. AND/OR THE PROFESSIONALS WHO SEALED THESE PLANS SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION MADE FROM THESE PLANS WHICH ARE NOT FULL SIZE. IN THE EVENT THAT ANY CHANGE OR DEVIATION FROM THE PLANS IS MADE WITHOUT THE WRITTEN CONSENT OF PACIFIC LAND ENGINEERING, INC. AND ITS CONSULTANTS, THE LAND ENGINEER OF RECORD FOR THE PROJECT HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR THE SAME.

MAZEN S. HAIDAR
STATE OF WASHINGTON
36034
REGISTERED
PROFESSIONAL ENGINEER

Date: 01 / 10 / 2024
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Job Number:
220520 - PLE - 2211

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Sheet No.
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OF
C - 7.0

7 20' Wide Private Access and Drainage Easement

4 5' Wide Private Water and Sewer Easement

12 10' Wide Private Drainage and Access Easement

20' 0' 20' 40'

SCALE : 1" = 20'

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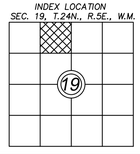
NOTE

ALL building permits are subject to meeting current fire code requirements at the time of a complete submittal, including fire apparatus access as outlined in adopted code sections of the International Fire Code Appendix D. Fire plan reviews will be conducted at time of building permit submittal and may require additional fire protection systems and/or additional fire prevention measures for building permit approval."

INDEX LOCATION
SEC. 19, T.24N., R.5E., W.M.



ROBERT J. BORDON
STATE OF WASHINGTON
23487
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PROFESSIONAL LAND SURVEYOR

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Project 4833 MI _ 4 - Lot Short Plat

Preliminary Short Plat Map

Plan Plotted For :
Fourth Submittal

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Civil Engineering Development Services Land Use Consulting
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THE CONCEPTS AND DESIGNS SHOWN ON THESE PLANS AS INSTRUMENTS OF SERVICE ARE AND SHALL REMAIN THE PROPERTY OF PACIFIC LAND ENGINEERING, INC. AND USE ON THIS PROJECT AND ANY EXTENSIONS THEREOF SHALL NOT BE WITHOUT THE WRITTEN CONSENT OF PACIFIC LAND ENGINEERING, INC. AND SHALL BE RETURNED UPON REQUEST.

Job Number:
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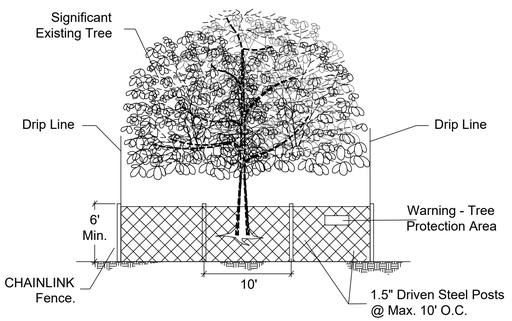
OF
C - 7.0



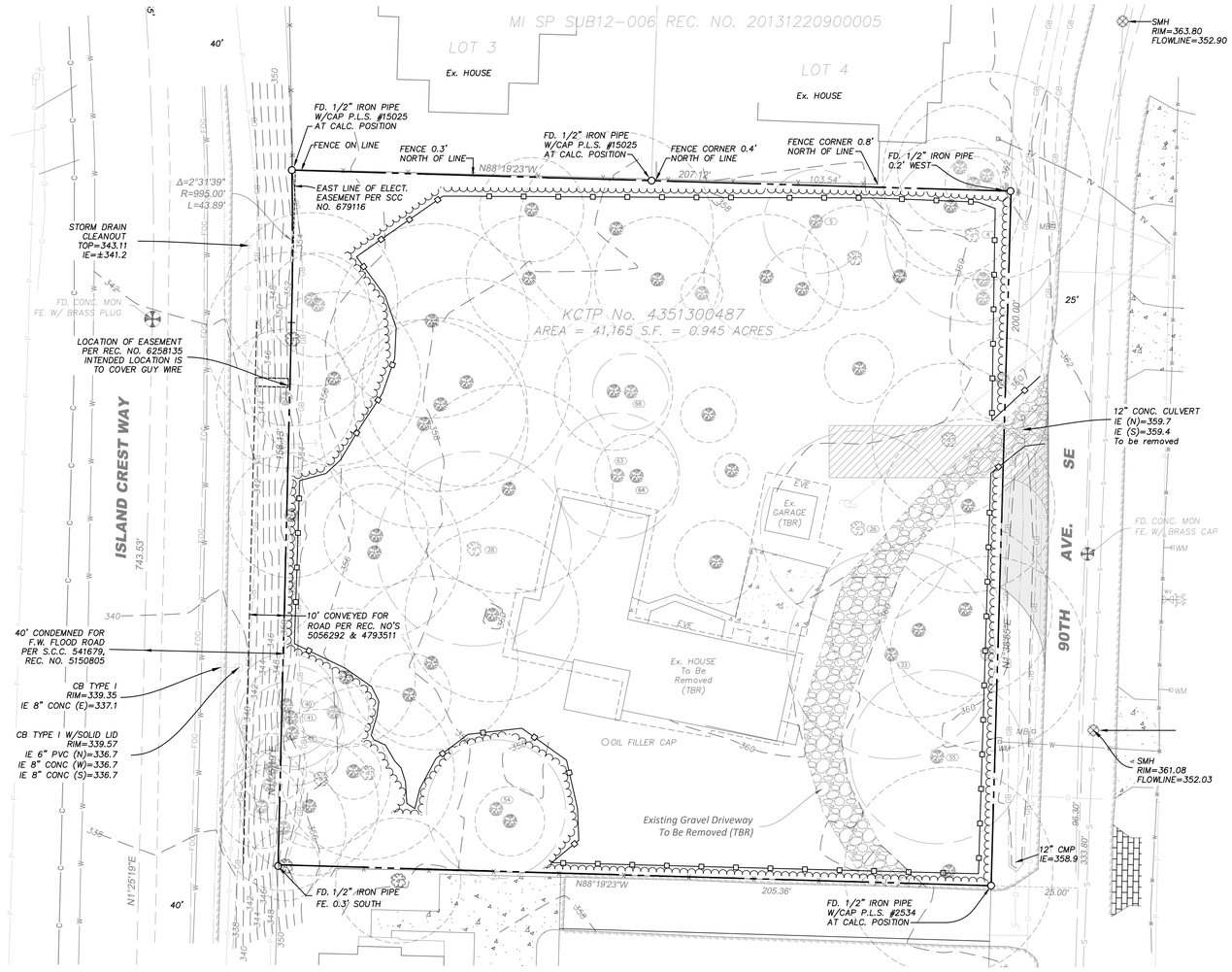
Tree Protection Detail

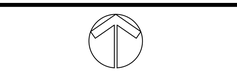
N.T.S.

NOTES:

1. MINIMUM SIX (6) FOOT HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT THE DRIP LINE OF THE SIGNIFICANT TREE(S). FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL POSTS USING 1.5-INCH STEEL POSTS DRIVEN 2-FEET INTO THE GROUND.
2. MOVABLE BARRIERS OF CHAIN LINK FENCING SECURED TO THE CEMENT BLOCKS MAY BE SUBSTITUTED FOR "FIXED" FENCING IF THE PROJECT ARBORIST AND CITY STAFF AGREE THAT THE FENCING WILL HAVE TO BE MOVED TO ACCOMMODATE CERTAIN PHASES OF THE CONSTRUCTION. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL AND PROJECT ARBORIST.
3. THE FENCING CAN BE MOVED WITHIN THE DRIP LINE OF THE TREE IF AUTHORIZED BY THE CLEARING AND GRADING INSPECTOR AND THE PROJECT ARBORIST BUT NOT CLOSER THAN 2' FROM THE TRUNK OF THE TREE. ONLY EXCAVATION BY HAND OR COMPRESSED AIR SHALL BE ALLOWED WITHIN THE DRIP LINE OF THE TREES. MACHINE TRENCHING SHALL BE ALLOWED.
4. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER TWO (2) INCH IN DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF THE ROOT, ALL EXPOSED ROOTS SHALL BE TEMPORARY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
5. NO STOCKING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.
6. FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN ALONG THE FENCE. THE SIGN SHALL BE MINIMUM OF 8.5-INCHES BY 11-INCHES.

SEC. 19, T.24N., R.5E., W.M.





LEGEND:

- = POWER POLE
- = GUY POLE
- = GUY ANCHOR
- = OVERHEAD POWER
- = FIRE HYDRANT
- = WATER VALVE
- = WATER METER
- = WATER LINE (PAINTED LOCATION)
- = UNDERGROUND COMMUNICATION (PAINTED LOCATION)
- = TELEVISION RISER
- = UNDERGROUND TELEVISION (PAINTED LOCATION)
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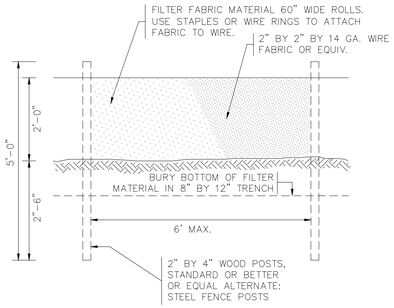
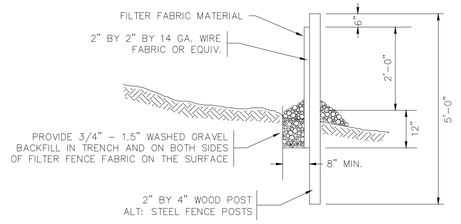
- = CONCRETE
- = CONCRETE PAVERS
- = GRAVEL
- = TBM = 60D SPIKE IN POWER POLE ELEV = 361.47 (NAVD 1988)

Site Limits Of Disturbance (LOD)

Fabric Silt Fence

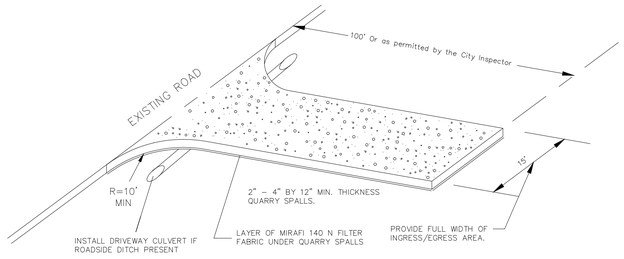
15' Wide X 50' Long X 12" Thick Temporary Construction Entrance





FILTER FABRIC FENCE DETAIL

NOT TO SCALE

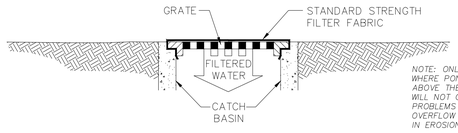


STABILIZED CONSTRUCTION ENTRANCE

(NOT TO SCALE)

CATCH BASIN INSERT MAINTENANCE STANDARDS

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON SITE OR HAULED OFF SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASINS PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.



CATCH BASIN INLET FILTER

N.T.S.

NOTE:

The purpose of this TESC site plan is to show the overall site clearing / disturbance limits as required by State Laws, it is not intended to show clearing limits / protection fencing around individual trees to be retained. So, to maintain plan clarity and prevent clutter of information shown, clearing limits / protection fencing around existing exceptional trees to remain is not shown on this site plan.

Clearing limits / protection fencing around existing Exceptional Trees to remain is shown on the attached Arborist Trees Protection Plan. Also, see tree protection fencing detail hereon at left.

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Temporary Erosion and Sedimentation Control (TESC) Plan

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering. Development Services. Land Use Consulting
Permit Expediting Services. Inspection Services. Expert Witness
Bellevue, WA - www.pacificlandwa.com
info@pacificlandwa.com (425) 615 - 6160

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DWG Date:
01 / 10 / 2024

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811
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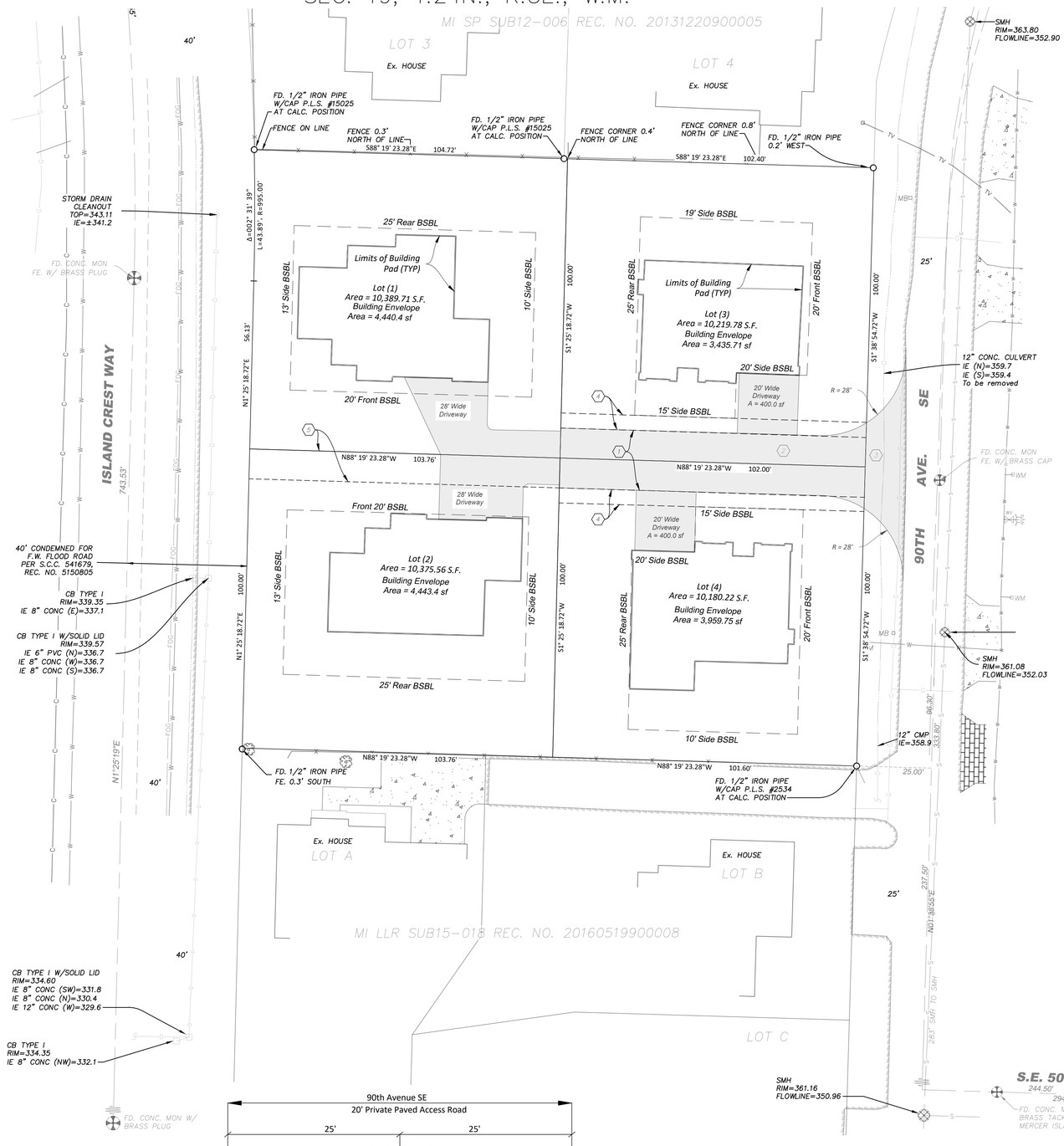
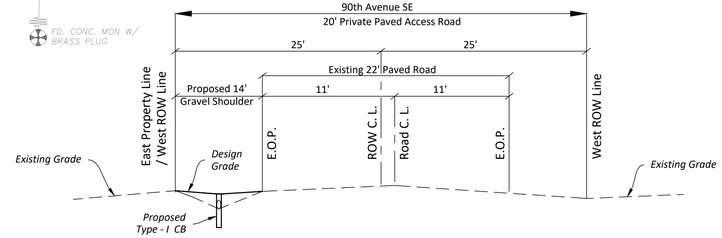




90th Ave SE Road Improvement

N.T.S.

Existing Site Data:

Parcel Number: 4351300487
Parcel Address: 4833 90th Ave. SE
Mercer Island, WA 98040
Zoning: R - 8.5
Total Parcel Area (per survey): 41,165 s.f. = 0.945 Acre

Total Existing Impervious Surfaces = 5,862.0 sf
Percentage of Existing Impervious Surfaces = 14.2 %
Total Existing Pervious Surfaces = Grass 4,632.0 sf + Forest 30,671.0 sf = 35,303.0 sf
Percentage of Existing Pervious Surfaces = 85.8 %

Zoning Requirements:

Min. Lot Width Required:	60'
Min. Lot Depth Required:	80'
Min. Lot Area Required:	8,400 s.f.
Max. Lot Coverage:	40%
Required Landscape:	60%
Required Front Yard Setback:	20'
Required Rear Yard Setback:	25'
Minimum Side Yard Setback:	7.5'
Minimum Total Side Yard Setback:	15'

Property Owner:

Mr. Jintao (Adison) Cui
Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

Project Contact:

Mr. Jintao (Adison) Cui
Home - Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
Email: adisoncui@outlook.com
(206) 265 - 0810

Project Engineer:

Mazen Haidar, PE
Pacific Land Engineering
mazen@pacificlandwa.com
(206) 615 - 6160

Project Surveyor:

Robert Bogdon, PLS
Eastside Consultants, Inc.
1320 N.W. Mall Street, Suite B
(425) 392 - 5351

Mercer Island Fire Department

4160 86th Ave SE
Mercer Island, WA 98040
(206) 236 - 3330

Telephone and Cable

Comcast
P. O. Box 60533
City of Industry, CA 91716
(800) 934 - 6489

Developed Site Date and Coverage Calculations:

Proposed Lot (1),

Total Lot Area = 10,389.71 sf
Building Envelope Area = 4,440.4 sf
Maximum Roof Area = 3,260.0 sf
Driveway Area = 865.5 sf
Lot Coverage = 3,260.0 + 865.5 = 4,125.5 sf
Percentage of Lot Coverage = 4,125.5 / 10,389.71 = 40%
Percentage of Landscape = (10,389.71 - 4,125.5) / 10,389.71 = 60%
Front Yard Setback = 20'
Rear Yard Setback = 25'
East Side Yard Setback = 10'
West Side Yard Setback = 13'

Proposed Lot (2),

Total Lot Area = 10,375.56 sf
Building Envelope Area = 4,443.4 sf
Maximum Roof Area = 3,260.0 sf
Driveway Area = 853.6 sf
Lot Coverage = 3,260.0 + 853.6 = 4,113.6 sf
Percentage of Lot Coverage = 4,113.6 / 10,375.56 = 40%
Percentage of Landscape = (10,375 56 - 4,113.6) / 10,375.56 = 60%
Front Yard Setback = 20'
Rear Yard Setback = 25'
East Side Yard Setback = 10'
West Side Yard Setback = 13'

Proposed Lot (3),

Total Lot Area = 10,219.78 sf
Building Envelope Area = 3,999.4 sf
Maximum Roof Area = 2,668.0 sf
Driveway Area = 400.0 sf
Road Area = 10' X 102' = 1,020.0 sf
Lot Coverage = 2,668.0 + 400 + 1,020 = 4,088.0 sf
Percentage of Lot Coverage = 4,088.0 / 10,219.78 = 40%
Percentage of Landscape = (10,219.78 - 4,088.0) / 10,219.78 = 60%
Front Yard Setback = 20'
Rear Yard Setback = 25'
North Side Yard Setback = 10'
South Side Yard Setback = 15'

Proposed Lot (4),

Total Lot Area = 10,180.22 sf
Building Envelope Area = 3,959.75 sf
Maximum Roof Area = 2,652.0 sf
Driveway Area = 400.0 sf
Road Area = 10' X 102' = 1,020.0 sf
Lot Coverage = 2,652.0 + 400 + 1,020 = 4,072.0 sf
Percentage of Lot Coverage = 4,072.0 / 10,180.22 = 40%
Percentage of Landscape = (10,180.22 - 4,072.0) / 10,180.22 = 60%
Front Yard Setback = 20'
Rear Yard Setback = 25'
North Side Yard Setback = 15'
South Side Yard Setback = 10'

Mercer Island School District

4160 86th Ave SE
Mercer Island, WA 98040
(206) 236 - 3330

Power and Gas Source

Puget Sound Energy (PSE)
P. O. Box 91269
Bellevue, WA 98009
(888) 321 - 7779

Water Purveyor

City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275 - 7602

Sewer Purveyor

King County
201 South Jackson Street
Seattle, WA 98104
(206) 296 - 1450

Lot Slope Calculations:

Lot (1),

(Grade 358 - Grade 356) / 104' = 1.90 %

Lot (2),

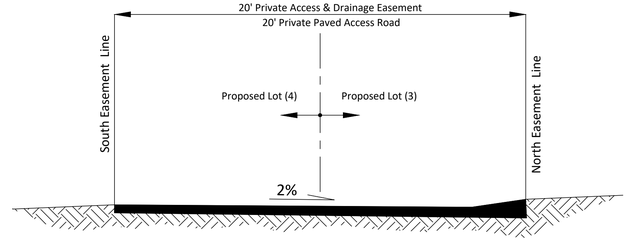
(Grade 358 - Grade 356) / 104' = 1.9%

Lot (3),

(Grade 360 - Grade 358) / 102' = 2.0 %

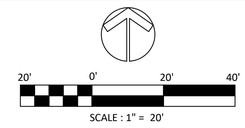
Lot (4),

(Grade 360 - Grade 358) / 102' = 2.0 %



20' Wide Private Access Road

N.T.S.



LEGEND:

- = POWER POLE
- = GUY POLE
- = GUY ANCHOR
- = OVERHEAD POWER
- = FIRE HYDRANT
- = WATER VALVE
- = WATER METER
- = WATER LINE (PAINTED LOCATION)
- = UNDERGROUND COMMUNICATION (PAINTED LOCATION)
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- = UNDERGROUND TELEVISION (PAINTED LOCATION)
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- = CONCRETE
- = CONCRETE PAVERS
- = GRAVEL
- = TBM = 60D SPIKE IN POWER POLE ELEV = 361.47 (NAVD 1988)

1. 20' Wide Private Access and Drainage Easement
2. 20' Wide Paved Access Road Area = 2,040 sf.
3. 20' Wide Paved Access Road Connection
4. 5' Wide Private Water and Sewer Easement
5. 10' Wide Private Drainage and Access Easement

LEGAL DESCRIPTION:

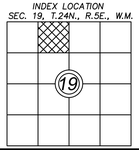
THE NORTH 200 FEET OF THE SOUTH 400 FEET OF VACATED BLOCK 4, LINDLEY ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 103, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED 90TH AVENUE ADJOINING PURSUANT TO KING COUNTY SUPERIOR COURT CAUSE NO. 679116.

EXCEPT THE WEST 10 FEET THEREOF CONVEYED TO KING COUNTY FOR ROAD BY DEEDS RECORDED UNDER RECORDING NO. 5056292 AND RECORDING NO. 4793511.

AND EXCEPT THAT PORTION THEREOF APPROPRIATED IN KING COUNTY SUPERIOR COURT CAUSE NO. 541679, RECORDED UNDER RECORDING NO. 4793511.

INDEX LOCATION
SEC. 19, T.24N., R.5E., W.M.



ROBERT J. BOGDON STATE OF WASHINGTON 53487 REGISTERED PROFESSIONAL LAND SURVEYOR

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ENGINEERS – SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 N.W. MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Developed Site Conditions Map

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
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Bellevue, WA - www.pacificlandwa.com
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MAZEN S. HAIDAR STATE OF WASHINGTON 36034 REGISTERED PROFESSIONAL ENGINEER

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DWG Date: 01 / 10 / 2024

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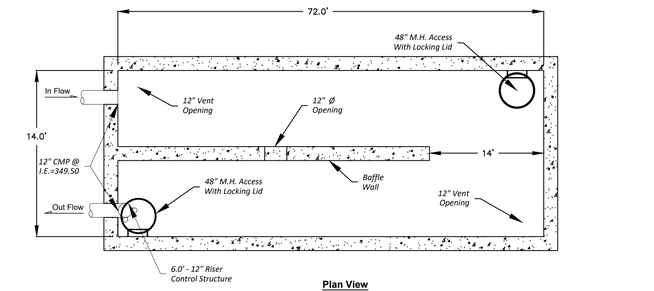
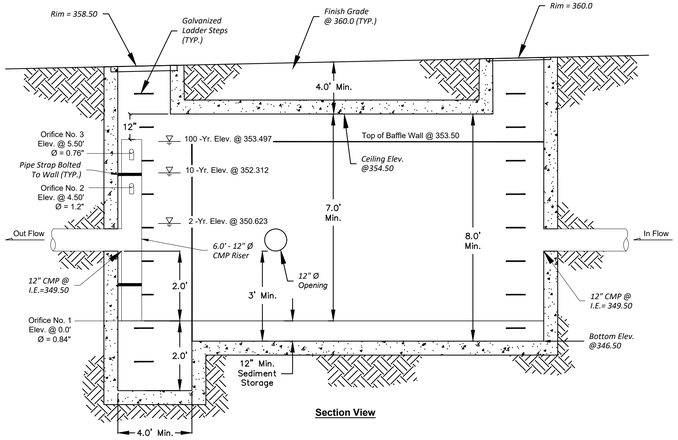
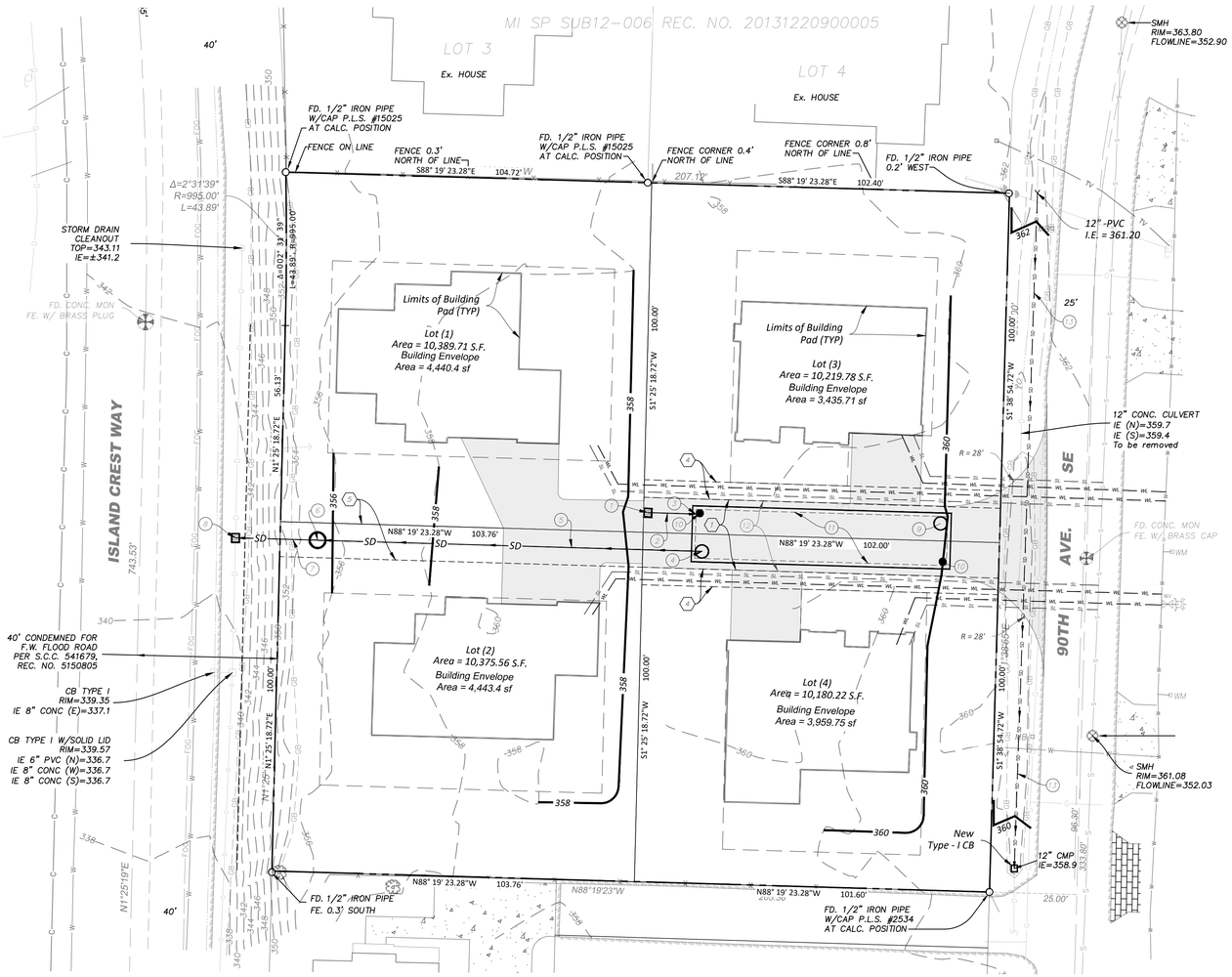


Plan View



Section View

72' X 14' X 8'
Concrete Detention Vault With Control Structure
N.T.S.



SCALE : 1" = 20'

LEGEND:

- = POWER POLE
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- = OVERHEAD POWER
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- = CONCRETE PAVERS
- = GRAVEL
- = TBM = 60D SPIKE IN POWER POLE ELEV = 361.47 (NAVD 1988)

SL — New 6" Side Sewer Line

WL — New 1" Water Line

1. 48" Type - II CB W/Locking Grate Rim = 357.75 I.E. = 350.20 - 12" Ø, E
2. 14' - 12" Ø HDPE @ 5%
3. 12" Ø HDPE I.E. = 349.50
4. 48" Ø Locking Lid Marked Drain Rim = 358.50 I.E. = 349.50
5. 110' - 12" Ø HDPE @ 10%
6. 52" Type II SDMH W/ Locking Lid Marked Drain Rim = 355.0 I.E. = 338.50 12" HDPE, E & W
7. 24.20' - 12" Ø HDPE @ 3.1%
8. Type - I CB W/Locking Grate Rim = 340.75 I.E. = 337.75 New 12" Ø, E & S Remove Ex. 8" Ø, S
9. 48" Ø Locking Lid Marked Drain Rim = 360.0 I.E. = 349.50
10. 12" Ø Vent Opening W/Locking Cover.
11. Underground Storm Water Detention Vault 72' Long X 14' Wide X 8' Deep, See Detail Hereon.
12. 20' Wide Paved Private Access Road See Detail Hereon.

Preliminary Cut/Fill Summary

	Cut Factor	Fill Factor	Cut		Fill		Net
Surface3	1.000	1.000	1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>
Totals			1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>

1. 20' Wide Private Access and Drainage Easement
2. 20' Wide Paved Access Road Area = 2,040 sf.
3. 20' Wide Paved Access Road Connection
4. 5' Wide Private Water and Sewer Easement
5. 10' Wide Private Drainage and Access Easement

Lot Slope Calculations:

Lot (1),

(Grade 358 - Grade 356) / 104' = 1.90 %

Lot (2),

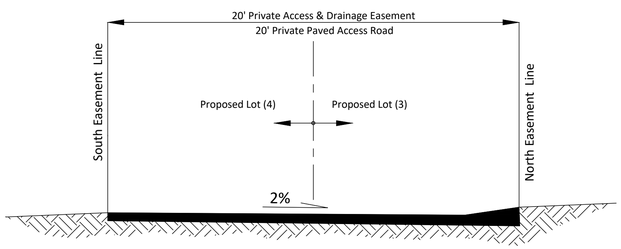
(Grade 358 - Grade 356) / 104' = 1.9%

Lot (3),

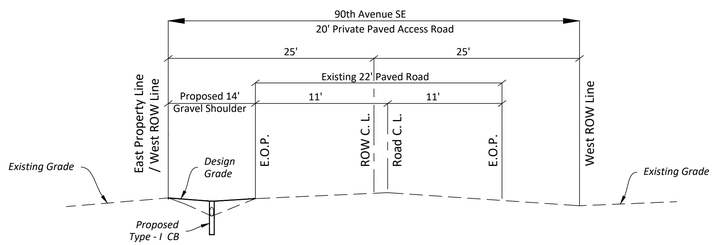
(Grade 360 - Grade 358) / 102' = 2.0 %

Lot (4),

(Grade 360 - Grade 358) / 102' = 2.0 %



20' Wide Private Access Road
N.T.S.



90th Ave SE Road Improvement
N.T.S.

NOTE

The utility design (water, sewer, and storm) shown on this sheet is conceptual only. They have not been reviewed for construction. All design related to water, sewer, storm and roadway are not approved and will be reviewed under a separate permit."

CALL 811 BEFORE YOU DIG 1-800-424-5555

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Preliminary Grading, Drainage, and Utilities Plan

Plan Plotted For :
Fourth Submittal

PACIFIC LAND ENGINEERING
Civil Engineering Development Services Land Use Consulting
Permit Expediting Services Inspection Services Expert Witness
Bellevue, WA - www.pacificlandwa.com
info@pacificlandwa.com (425) 615 - 6160

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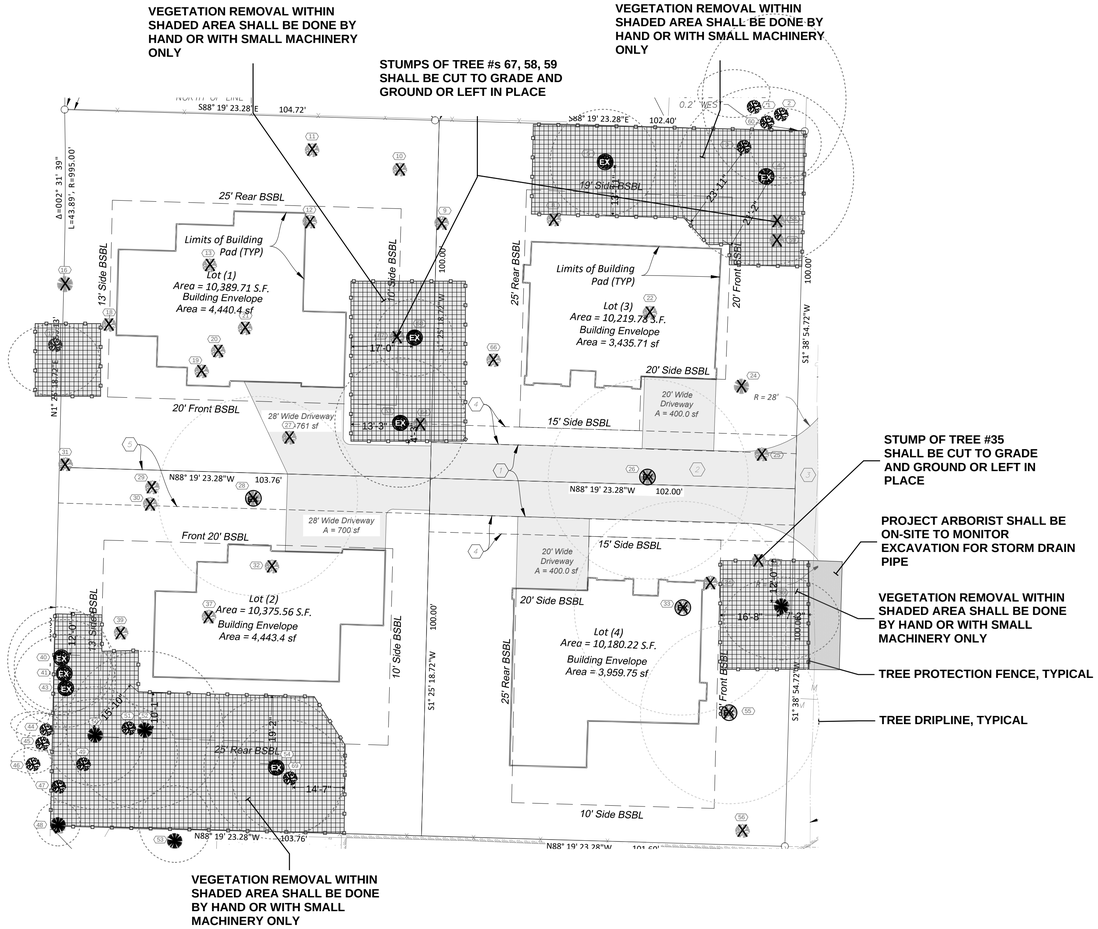
MAYEN S. HALDAR
STATE OF WASHINGTON
36034
REGISTERED PROFESSIONAL ENGINEER

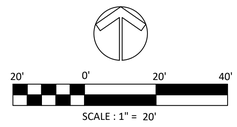
Date: 01 / 10 / 2024
STAMP IS NOT VALID UNLESS SIGNED AND DATED

Job Number:
220520 - PLE - 2211

DWG Date:
01 / 10 / 2024

Sheet No.
C - 7.0
OF
C - 7.0





LEGEND:

- = TREE PROTECTION FENCE
- 1 = TREE IDENTIFIER
- = LARGE TREE REMOVE
- = EXCEPTIONAL TREE REMOVE
- = LARGE TREE RETAIN
- = EXCEPTIONAL TREE RETAIN
- = TREE DRIPLINE

TREE RETENTION CALCULATIONS	
TOTAL LARGE TREES	49 TREES
TOTAL RETAINED TREES	16 TREES
TOTAL TREE RETENTION	32.7%

Note: Trees that are exceptional by size per MICC 19.10 but which are non-viable are noted as such in the exceptional designation column in the tables below

TREES TO BE RETAINED

Tree No.	Common Name	DBH (in)	Viable	Dripline Avg (ft)	Exceptional	Proposed Action
3	*Bigleaf Maple*	22.5	Yes	24		Retain
4	*Douglas-fir*	41.5	Yes	20	Yes	Retain
5	*Madrone*	14.6	Yes	12	Yes	Retain
36	*Deodar Cedar*	19.4	Yes	14		Retain
40	*Madrone*	7.5	Yes	6	Yes	Retain
41	*Madrone*	10.9	Yes	10	Yes	Retain
43	*Madrone*	9.6	Yes	5	Yes	Retain
47	*Madrone*	10.3	No	6	No - not viable	Retain
49	*Bigleaf Maple*	18.7	Yes	19		Retain
50	*Douglas-fir*	26.1	Yes	14		Retain
51	*Bigleaf Maple*	11.1	No	0		Retain
52	*Bigleaf Maple*	21.9	Yes	21		Retain
54	*Madrone*	13.9	Yes	10	Yes	Retain
63	*Madrone*	25.2	Yes	19	Yes	Retain
68	*Madrone*	18.1	Yes	9	Yes	Retain
69	*Bitter cherry*	14.8	Yes	16		Retain

TREES TO BE REMOVED

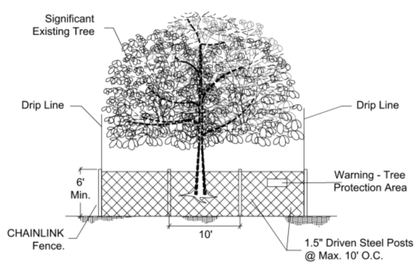
Tree No.	Common Name	DBH (in)	Viable	Dripline Avg (ft)	Exceptional	Proposed Action
8	*Bigleaf Maple*	12.1	No	9		Remove
9	*Bigleaf Maple*	20.9	No	11		Remove
10	*Black cottonwood*	28.7	Yes	32		Remove
11	*Madrone*	11.9	No	3	No - not viable	Remove
12	*Madrone*	18.9	No	11	No - not viable	Remove
13	*Bigleaf Maple*	19.5	No	20		Remove
16	*Douglas-fir*	17.5	No	14		Remove
18	*Madrone*	20.1	No	10	No - not viable	Remove
19	*Bigleaf Maple*	19.6	No	14		Remove
20	*English holly*	12.7	No	16		Remove
21	*Bigleaf Maple*	21.2	No	12		Remove
22	*Red alder*	12.2	No	14		Remove
24	*Western Redcedar*	23.5	Yes	16		Remove
25	*Bigleaf Maple*	19.6	No	20		Remove
26	*Douglas-fir*	38.6	Yes	26	Yes	Remove
27	*Bigleaf Maple*	32.9	No	30	No - not viable	Remove
28	*Western Redcedar*	39.1	Yes	24	Yes	Remove
29	*Madrone*	10.4	No	12	No - not viable	Remove
30	*Bigleaf Maple*	20.0	No	19		Remove
31	*Douglas-fir*	15.5	Yes	14		Remove
32	*Bigleaf Maple*	28.3	No	26		Remove
33	*Madrone*	28.1	Yes	22	Yes	Remove
34	*Bigleaf Maple*	25.1	No	14		Remove
35	*Bigleaf Maple*	31.6	No	27	No - not viable	Remove
37	*Bigleaf Maple*	17.6	No	21		Remove
39	*Bigleaf Maple*	21.2	No	8		Remove
55	*Bigleaf Maple*	32.0	Yes	23	Yes	Remove
56	*Bigleaf Maple*	36.9	No	26	No - not viable	Remove
58	*Willow (native)*	9.5	No	3	No - not viable	Remove
59	*Willow (native)*	9.2	No	7	No - not viable	Remove
64	*Madrone*	8.5	No	8	No - not viable	Remove
66	*Bitter cherry*	10.1	No	11		Remove
67	*Bigleaf Maple*	15.6	No	12		Remove

TABLE 1 - ARBORIST RECOMMENDATIONS FOR TREE PROTECTION

General – All Retained Trees

1. **Tree Protection Fence: shall be installed as shown on the Tree Protection Plan and consist of 6-foot-tall chain-link fencing. Fencing shall be installed on concrete footings and securely attached by clamping the panels together.**
2. **Tree Protection Signage: plastic laminate signs shall be affixed to the fencing in 15-foot intervals using zip ties or wire which state "Tree Protection Area – Keep Out".**
3. **No work, excavation, trenching, material storage, cleaning or dumping shall occur behind the tree fencing.**
4. **Under no circumstances shall the grade be lowered within the Tree Protection Fencing area.**
5. **All invasive and other vegetation removed within the driplines of the trees shall be done mainly by hand or using small machinery only.**
6. **The stumps of removed trees within Tree Protection Areas shall be left in place and not ripped from the ground with heavy machinery.**

TREE PROTECTION DETAIL



Tree Protection Detail

N.T.S.

PROJECT 4833 MI_4 - LOT SHORT PLAT

TREE RETENTION PLAN

CASCARA TREE CONSULTING

PN-8078A
QUALIFIED TREE RISK ASSESSOR

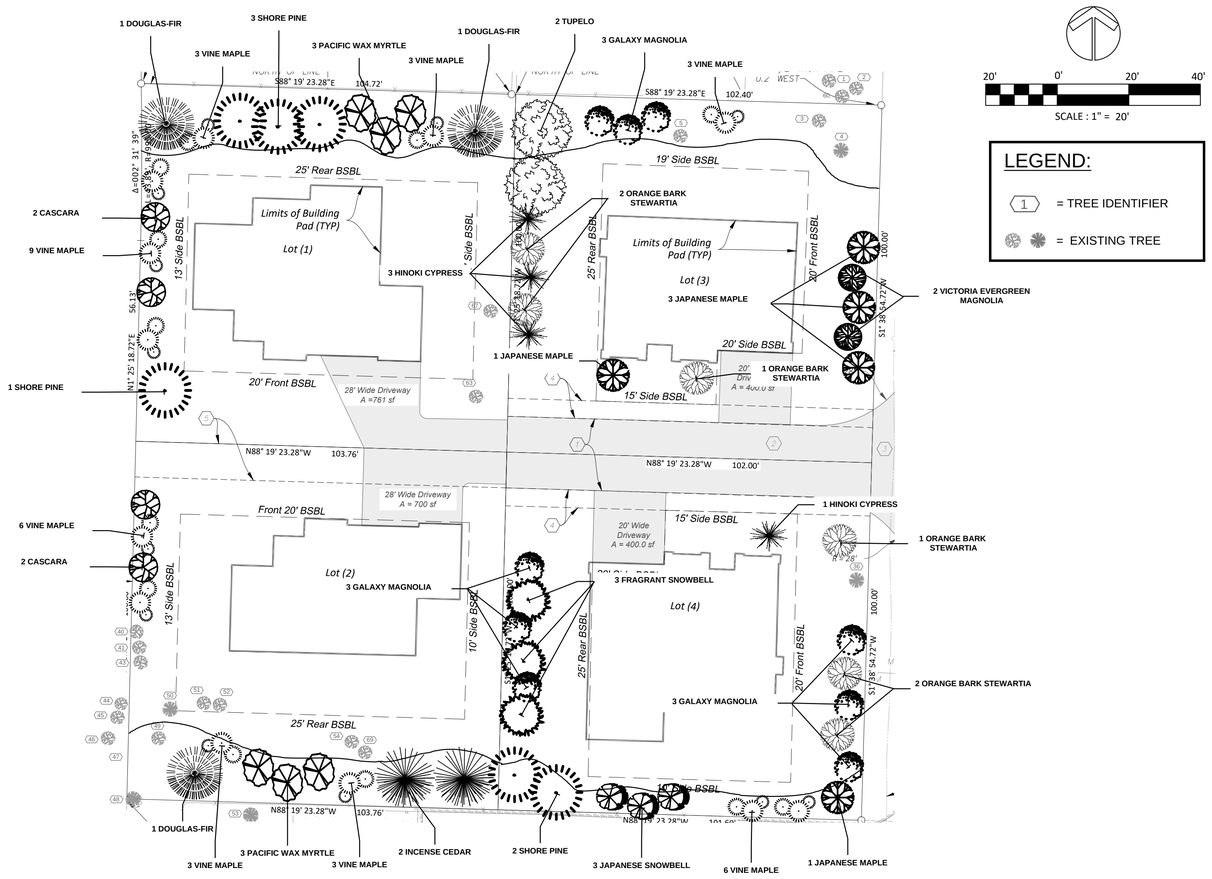
CERTIFIED ARBORIST ISA ®

PREPARED:

8/9/2023
V1: 12/6/2023
V2: 1/7/2024

SHEET NO.

TR-01



20' 0' 20' 40'

SCALE : 1" = 20'

LEGEND:

1 = TREE IDENTIFIER

= EXISTING TREE

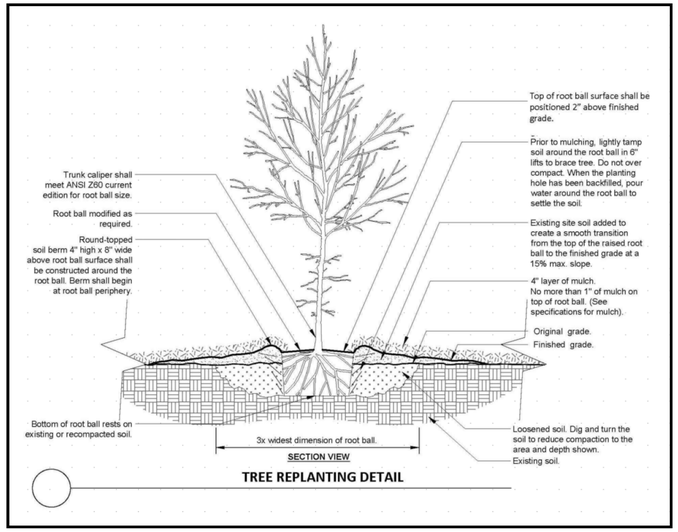
Tree Planting Schedule

Symbol	Species	Scientific Name	Native	Qty	Size
	Douglas-fir	*Pseudotsuga menziesii*	**Yes**	3	6' tall
	Shore Pine	*Pinus contorta*	**Yes**	6	6' tall
	Incense Cedar	*Calocedrus decurrens*	No	2	6' tall
	Tupelo	*Nyssa sylvatica*	No	2	1.5" caliper
	Cascara	*Frangula purshiana*	**Yes**	4	1.5" caliper
	Victoria Evergreen Magnolia	*Magnolia grandiflora* 'Victoria'	No	4	1.5" caliper
	Pacific Wax Myrtle	*Myrica californica*	**Yes**	6	1.5" caliper
	Vine Maple	*Acer circinatum*	**Yes**	33	1.5" caliper
	Japanese Maple	*Acer palmatum*	No	5	1.5" caliper
	Orange Bark Stewartia	*Stewartia monadelpha*	No	6	1.5" caliper
	Hinoki Cypress	*Chamaecyparis obtusa*	No	4	6' tall
	Galaxy Magnolia	*Magnolia 'Galaxy'*	No	9	1.5" caliper
	Fragrant Snowbell	*Styrax obassia*	No	3	1.5" caliper
	Japanese Snowbell	*Styrax japonicus*	No	3	1.5" caliper

Total Replacement Trees	
Native	52
Non-Native	38
Total Replacement Trees	90

TREE PLANTING SPECIFICATIONS

- **Stage all trees before installation.**
- **Spacing on the plan is approximate. Trees shall be planted no closer than 10 feet apart. Large conifer trees shall be spaced 15 to 20 feet apart.**
- **Dig a hole at least 2 x the width of the root ball. The hole should be as deep as the root ball.**
- **Remove the tree from the container. If wrapped in burlap and wire, all materials should be removed prior to planting.**
- **Gently break up the root ball and cut away any wrapping/girdling roots.**
- **Place the root ball in the hole and fill the hole with loose soil.**
- **Ensure the root collar is not buried when filling the hole.**
- **Pack the soil down gently and water deeply.**



TREE REPLANTING DETAIL

PROJECT 4833 MI_4 - LOT SHORT PLAT

TREE PLANTING PLAN

CASCARA TREE CONSULTING

PN-8078A
QUALIFIED TREE RISK ASSESSOR

CERTIFIED ARBORIST ISA ®

PREPARED:

8/9/2023
[Revised 12/6/2023]

SHEET NO.

TR-02

PACIFIC LAND ENGINEERING
Civil Engineering . Land Use Consulting . Development Design
Utilities Design . Permit Expediting . Construction Inspection

RESIDENTIAL ◆ COMMERCIAL ◆ GOVERNMENT
Bellevue, WA 98005 ◆ (425) 615 – 6160
info@pacificlandwa.com

Project Narrative
Project 4833
Preliminary 4 Lot Short Plat

The subject property is King County parcel number 4351300487 encumbering 41,165 sf / 0.945 acre (per survey) of fully developed land situated in Section 19, Township 24 North, Range 5 East and is legally described as LINDEY ADD TO Seattle N 200 FT of S 400 of VAC BLK 4 TGW POR VAC ST SC 679116 LESS ST LESS Mercer Island Trunk LN. The subject parcel is in residential zoned R – 8.4 area of the city of Mercer Island, more specifically, the subject parcel is located at 4833 90th Avenue SE, Mercer Island WA 98040. The subject parcel is boarded by fully developed residential properties across its north and south property lines, by Island Crest Way across its westerly property line, and by 90th Ave SE across its easterly property, see attached vicinity map exhibit for additional information. The subject parcel is currently occupied by existing house, attached garage / carport, and existing U-shaped gravel driveway all to be removed (TBR). The existing ground cover in the subject parcel predominantly consist of large cluster of mature trees, second growth understory vegetation, and single-family back yard lawns. The existing site topography is oriented east to west with overall grade slope of 2% to 5% before changing to over than 20% within Island Crest Way right-of-way across the subject parcel westerly property line.

Public Water and sewer system do exist in 90th Ave SE across the easterly frontage, the existing house appears connected to existing public water system and served by existing site sewage system to be removed. Surface flows appears to sheet flow in the westerly direction which is the natural discharge location for the subject site. Based on the attached site survey, and the city IGS website there appear no upstream surface flows tributary to the subject parcel, and surface flows from 90th Ave SE are intercepted by an existing roadside ditch running across the subject parcel easterly property line whereby surface flows continue southerly away from the subject parcel.

As mentioned, the subject parcel is located within residential zoned R-8.4 area of the city of Mercer Island and therefor, the development proposal is to sub-divide the subject parcel into 4 separate residential lots consistent with MICC 19.02.020 for R-8.4 zone.

The proposed development completed the first phase of development permitting process with the city of Mercer Island under pre-application meeting number PRE22 – 028, and under which city staff issued Pre-Application Notes document dated May 17th, 2022 that included project summary, staff notes, and answers to specific questions raised by the applicant and his team, see attached Level – I Drainage Report for more information.

Pursuant MICC 19.02.020 – Development Standards for residential R-8.4 zone and the above referenced pre-application meeting notes, the proposed development will create a total of four residential new lots as follows:

Lot #	Lot Area (SF)	Building Setbacks						Buildg. Envelope Area (SF)	Maximum Roof Area (SF)	Dwy. Area (SF)	Lot Cov. Area (SF)	% of Lot Cov.	% of Landscape
		Front	Rear	E	W	N	S						
1	10,389.71	20'	25'	10'	13'			4,440.40	3,260.00	865.50	4,125.50	40	60
2	10,375.56	20'	25'	10'	13'			4,443.40	3,260.00	853.60	4,113.60	40	60
3	10,219.78	20'	25'			10'	15'	3,999.40	2,668.00	400.00	4,088.00	40	60
4	10,180.22	20'	25'			15'	10'	3,959.75	2,652.00	400.00	4,072.00	40	60

Additionally, the proposed development will create 102' long X 20' wide private access and drainage easement with 20' paved access road to serve all proposed 4 lots. The proposed 4-lot short plat will also be served by existing public utilities (water, sewer, gas, power, telephone, and cable) in 90th Ave. SE across the easterly property line of the subject parcel. Consistent with city of Mercer Island Drainage Code Requirement and 2012 Washington State Department of Ecology (DOE) Drainage Manual for Western Washington as amended in 2014, the proposed 4-lot short plat will provide 72' long X 14' wide X 8' deep underground concrete stormwater detention / retention (R/D) vault under the proposed on-site private paved access road to mitigate for the site developed conditions.

o0o

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Bellevue, WA 98005 • (425) 615 – 6160
info@pacificlandwa.com

August 20th, 2023

Revised Project Narrative
Cui Short Plat
SUB22 – 009

MICC 19.08.020 (D) (1), Findings of Fact.

a. The subject parcel 4351300487 is currently occupied by an existing abandoned old house that lacks significant maintenance and property up-keeping, thereby creating public health, public safety, and well-being concerns to adjacent properties and public welfare in general. While the proposed 4 Lot Short Plat will ensure public safety and will create economic growth to surrounding neighborhood and the City of Mercer Island.

   The proposed 4 Lot Short Plat will improve the street conditions and Level of Service in 90th Avenue Southeast by providing road improvement across the subject parcel frontage as requested by the City of Mercer Island.

   The proposed 4 Lot Short Plat will manage storm water in the developed site conditions to protect downstream drainage ways by providing on-site stormwater detention facilities consistent with City of Mercer Island requirements and consistent with the State of Washington Department of Ecology (DOE) Drainage Manual for Western Washington.

   The subject parcel contains many existing trees that are in poor condition, see attached Arborist Report. The proposed 4 Lot Short Plat will improve the natural environmental conditions by planting new trees around the perimeters of the proposed sub-division which creates healthier vegetated open space and whereby benefiting adjacent properties and general welfare.

   The proposed 4 Lot Short Plat will connect to city potable water and Sanitary sewer systems that currently exist in 90th Ave SE across the subject parcel frontage consistent with applicable code requirements. Therefore, additional provisions to improve city potable water and sewer systems are not warranted and none will be provided.

   The proposed 4 Lot Short Plat will not impact existing transit stops, parks and recreation, playgrounds, schools and schoolgrounds. Therefore, additional provisions to improve these facilities are not warranted and none will be provided.

   The property owner contacted the City of Mercer Island School District; and based on the district emails; existing walks / paths to and from school facilities do provide safe student walking measures, and the district did not ask for any additional student walks improvement and therefore none will be provided.

b. In our opinion the public use and interest will be served by the approval of the subject 4 Lot Short Plat, because as mentioned, the proposed 4 Lot Short Plat will provide safer and healthier natural vegetated environment, will protect the surrounding neighborhood from illegal activities in this abandoned house, and will provide drainage / storm water mitigation / control that protect the natural downstream drainage courses.

c. The proposed 4 Lot Short Plat conform to applicable R-8.4 zoning and land use regulations including minimum required lot sizes, dimensions, building setbacks, access requirements, lot coverage percentages, lot landscape percentages, gross floor area requirement, site disturbance and grading, surface water runoff control, combined utilities corridor, and fire access.

MICC 19.08.030, Design Standards.

B. Public Improvements.

1. The proposed 4 Lot Short Plat will provide road improvement in 90th Ave. NE across its frontage by filling and piping existing roadside ditch as requested by the city. No other public road improvements or right-of-way dedication have been requested by the city and therefore, the proposed 4 Lot Short Plat is in reconciliation with the current official plans for acquisition and development of Arterial or other public streets.

2. The development proposal is a 4 Lot Short Plat and not a full Plat, it does not include dedication of public parks, and does not donate designated parks with specific names. Therefore, this code provision does not apply to this specific development proposal.

C. Control of Hazards.

1. The proposed project will not adversely impact the health, safety, and welfare of, or inflict expenses or damage upon, residents, or property owners within or adjoining the project, other members of the public, and will not cause flooding, drainage problem to critical slopes, unstable soils, traffic access, public safety, or other causes. The provided Civil Plans set includes preliminary Temporary Erosion and Sedimentation Control (TESC) Plan, and detailed hazard control plan will be provided during the engineering review process for city review and approval and prior to the start of construction work.

2. The project proposal included Geotechnical Report documentation dated February 18th, 2022 and Level One Drainage Report dated November 1st, 2022, see attached. Both reports provided ample discussion and information consistent with applicable code provision in Chapter 15.09. More specifically, the drainage report included designs and hydraulic calculation for on-site storm water vault consistent with Chapter 15.09 and Washington State DOE manual as adopted by the City of Mercer Island.

3. The proposed 4 Lot Short Plat does not include alternative tightline storm drain drains to Lake Washington, and therefore, this code provision does not apply to this specific 4 Lot Short Plat.

D. Streets, Roads, and Right-Of-Way.

1. The existing width and location of right-of-way (ROW) in 90th Ave SE are consistent with MICC 19.09.030 as shown on the attached Civil Plans Sheet C – 4.0, the City of Mercer Island did not request additional ROW dedication or road improvement other than piping existing roadside ditch across the subject short plat frontage which is shown on the attached Civil Plans Sheet C – 7.0.

2. The existing width and right-of-way (ROW) in 90th Ave SE are consistent with MICC 19.09.030, the City of Mercer Island did not request additional ROW dedication and therefore no additional ROW dedication is warranted, and none will be provided.

3. The proposed private access driveway as shown on the attached Civil Plans, Sheets C – 4.0, C – 6.0 and Sheet C – 7.0 is consistent with MICC 19.09.040, this private access road is 20' wide by 102' long paved surface consistent with MICC 19.09.040-B. This private access road is 102' long which is less than 150', nonetheless the corners of this private access road intersecting 90th Ave SE have 28' turning radius consistent with MICC 19.09.040-C as shown on the attached Civil Plans Sheets C – 6.0 and C – 7.0. This private access road is 102' long, which is less than 150', therefore Cul-De-Sac improvement at the end of this access road is not warranted and none is provided, consistent with 19.09.040-E. Each of the proposed individual driveways is 20' wide, which is more than 8' consistent with 19.09.040-F.

4. The proposed private access driveway will directly connect to the existing paved road in 90th Ave SE as shown on the attached Civil Plans, Sheets C – 6.0 and C – 7.0.

E. Residential Lots.

1. The area, width, and depth of each proposed lot is consistent with R-8.4 zone as shown on the attached Civil Plans Sheets C – 4.0, C – 6.0 and C – 7.0.

2. Each lot sideline is perpendicular to the center of line of the street in which the lots front as shown on the attached Civil Plans Sheets C – 4.0, C – 6.0 and C – 7.0.

3. The building pad for each proposed lot is more than 20' in width and is consistent with MICC 19.09.090 as shown on the attached Civil Plans Sheets C – 6.0 and C – 7.0. The proposed building pads are located within required building setback limits (front, rear, and sides), the building pads are located in the manner that minimizes site grading, and disturbance of site topography, no impacts to critical areas (none exist on or adjacent to the subject parcel), minimizes removal of existing healthy trees beyond necessary. The building pads are located consistent with all provisions of MICC 19.09.040 as explained above.

4. This proposed 4 Lot Short Plat is consistent with all provision of MICC 19.9.100 as shown on the attached Civil Plans Sheets C – 4.0, C – 6.0 and C – 7.0

   proposed building pads are not located within critical areas or its required buffer and BSBL areas.
   The proposed building pads are not located within street ROW.
   The proposed building pads are not located within step slopes or within 10' from the top of the steep slopes.

The proposed building pads are more than 20’ in cross section width.
All proposed utilities are now shown in one common access and utilities corridor as shown on the attached Civil Plans Sheet C – 7.0.
No development proposal is within critical areas.
No retaining walls are being proposed for the construction of this proposed 4 Lot Short Plat.

5. Every effort has been made to comply with MICC 19.10 provisions, please refer to attached Arborist Responses, Arborist Report, Trees Retention Plan, and Trees Planting Plan for more information.

****

Fidelity National Title

Fidelity National Title
3500 188th St. SW, Suite 300

Commitment for Title Insurance

Fidelity National Title
3500 188th St. SW, Suite 300
Lynnwood, WA 98037
Phone: (425)771-3031

Title Officer: Bill Fisher / Paula Luxmore / Brenda McCoy
Email: Unit2@fnf.com
Phone: (425)771-3031
File No.: 611311326

Property Address: 4833 90th Avenue Southeast Mercer Island, WA 98040

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SUBDIVISION

Issued By:

Fidelity National Title®
Insurance Company

Guarantee/Certificate Number:

611311326 - SECOND

FIDELITY NATIONAL TITLE INSURANCE COMPANY

a corporation, herein called the Company

GUARANTEES

Home-Link Capital LLC, a Washington Limited Liability Company; and Better Properties Eastside

herein called the Assured, against actual loss not exceeding the liability amount stated in Schedule A which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

LIABILITY EXCLUSIONS AND LIMITATIONS

1. No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in Schedule A or with respect to the validity, legal effect or priority of any matter shown therein.
2. The Company's liability hereunder shall be limited to the amount of actual loss sustained by the Assured because of reliance upon the assurance herein set forth, but in no event shall the Company's liability exceed the liability amount set forth in Schedule A.

Please note carefully the liability exclusions and limitations and the specific assurances afforded by this guarantee. If you wish additional liability, or assurances other than as contained herein, please contact the Company for further information as to the availability and cost.

Fidelity National Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Fidelity National Title Company of Washington, Inc.
3500 188th St. SW, Suite 300
Lynnwood, WA 98037

Countersigned By:

Julie Sundin
Authorized Officer or Agent

FIDELITY NATIONAL TITLE INSURANCE COMPANY CORPORATE SEAL

ISSUING OFFICE:
Title Officer: Bill Fisher / Paula Luxmore / Brenda McCoy Fidelity National Title Company of Washington, Inc. 3500 188th St. SW, Suite 300 Lynnwood, WA 98037 Phone: (425)771-3031 Main Phone: (425)771-3031 Email: Unit2@fnf.com

SCHEDULE A

Liability	Premium	Tax
$1,000.00	$350.00	$36.75

Effective Date: October 3, 2022 at 12:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matter relative to the following described property:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Title to said real property is vested in:

Home-Link Capital LLC, a Washington limited liability company

subject to the matters shown below under Exceptions, which Exceptions are not necessarily shown in the order of their priority.

END OF SCHEDULE A

EXHIBIT "A"

Legal Description

For APN/Parcel ID(s): 435130-0487-03

THE NORTH 200 FEET OF THE SOUTH 400 FEET OF VACATED BLOCK 4, LINDLEY ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 103, RECORDS OF KING COUNTY, WASHINGTON.

TOGETHER WITH THAT PORTION OF VACATED 90TH AVENUE ADJOINING PURSUANT TO KING COUNTY SUPERIOR COURT CAUSE NO. 679116.

EXCEPT THE WEST 10 FEET THEREOF CONVEYED TO KING COUNTY FOR ROAD BY DEEDS RECORDED UNDER RECORDING NO. 5056292 AND RECORDING NO. 4793511.

AND EXCEPT THAT PORTION THEREOF APPROPRIATED IN KING COUNTY SUPERIOR COURT CAUSE NO. 541679, RECORDED UNDER RECORDING NO. 5150805.

SCHEDULE B

GENERAL EXCEPTIONS:

H. Reservations and exceptions in United States Patents or in Acts authorizing the issuance thereof.

SPECIAL EXCEPTIONS:

1. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Lindley Addition to Seattle:

   Recording No: 32487

2. Right to make necessary slopes for cuts or fills upon property herein described as granted or reserved in deed

   Road: Frank W. Flood Road
   Recording Date: January 21, 1929
   Recording No.: Volume 29 Page 345 of Commissioner's Records
   Affects: Reference is hereby made to document for full particulars

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

   Purpose: Pipe line
   Recording Date: January 23, 1948
   Recording No.: 3766695
   Affects: Reference is hereby made to document for full particulars

4. Right to make necessary slopes for cuts or fills upon property herein described as granted or reserved in deed

   In favor of: King County
   Recording Date: May 1, 1957
   Recording No.: 4793511

   and

   Recording Date: July 15, 1959
   Recording No.: 5056292

5. Easement condemned in King County Superior Court and the terms and conditions thereof:

   In favor of: Puget Sound Power & Light Company
   Purpose: Electric transmission and/or distribution system
   Affects: Reference is hereby made to document for full particulars
   Cause No.: 679116

SCHEDULE B
(continued)

6. Easement condemned in King County Superior Court, and the terms and conditions thereof:

In favor of: City of Mercer Island
Purpose: Water pipelines
Affects: The description contained therein is not sufficient to determine its exact location within the property herein described
Cause No.: 679116

7. Decree of Appropriation entered in King County Cause No. 541679 and the terms and conditions thereof:

Recording Date: April 13, 1960
Recording No.: 5150805

8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Power & Light Company
Purpose: Utilities
Recording Date: October 31, 1967
Recording No.: 6258135
Affects: Reference is hereby made to document for full particulars

9. Notice of Additional Tap or Connection Charges and the terms and conditions thereof:

Recording Date: December 6, 1977
Recording No.: 7712060812

10. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Mercer Island Lot Line Revision Sub15-018:

Recording No: 20160519900008

11. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year: 2022
Tax Account Number: 435130-0487-03
Levy Code: 1031
Assessed Value-Land: $2,308,000.00
Assessed Value-Improvements: $131,000.00

General and Special Taxes: Billed: $17,965.59
Paid: $17,965.59
Unpaid: $0.00

SCHEDULE B
(continued)

12. The search did not disclose any open mortgages or deeds of trust of record, therefore the Company reserves the right to require further evidence to confirm that the property is unencumbered, and further reserves the right to make additional requirements or add additional items or exceptions upon receipt of the requested evidence.

13. Any rights, interests, or claims of parties in possession of the Land not shown by the public records.

NOTES:

Note: FOR INFORMATIONAL PURPOSES ONLY:

The following may be used as an abbreviated legal description on the documents to be recorded, per Amended RCW 65.04.045. Said abbreviated legal description is not a substitute for a complete legal description within the body of the document:

Block: Ptn. Blk. 4 Lindley Add. to Seattle; Vol. 3/103 Tax/Map ID(s):
Tax Account No.: 435130-0487-03

Note: The Public Records indicate that the address of the improvement located on said Land is as follows:

4833 90th Avenue Southeast
Mercer Island, WA 98040

END OF SCHEDULE B

CASCARA TREE CONSULTING
ARBORIST REPORT

TO:	Mr. Jintao (Addison) Cui
REFERENCE:	Arborist Report RE: SUB22-009 (Cui Preliminary Short Subdivision)
SITE ADDRESS:	4833 90th Ave SE, Mercer Island, WA
DATE:	8/9/2023
PREPARED BY:	Katie Hogan, ISA Certified Arborist PN-8078A ISA Tree Risk Assessment Qualified

I conducted an inventory and assessment of 56 trees measuring 10-inches Diameter at Breast Height (DBH) or greater at the above-addressed site; 23 of which meet the Exceptional size threshold. Of the 56 trees assessed, 22 were in good to fair health and structural condition and considered viable; 12 of which are viable Exceptional trees.

The project proposes retention of 10 out of the 22 viable trees on the site for a total retention of 45-percent meeting the requirements of MICC 19.10.060(a)(2)(a). Of the 10 trees proposed for retention, 5 are Exceptional. See Tables 1 and 2 below for a summary of tree retention.

Table 1. Summary Tree Table

Summary Tree Table	
Total Trees	56
Total Viable Trees	22
Total Not Viable Trees	34
Total Viable Retain	10
Total Viable Remove	12
# Trees Required to Retain per MICC 19.10.060 (30%)	7
Total Retention Percentage	**45%**

Table 2. Summary Exceptional Tree Table

Summary Exceptional Tree Table	
Total Exceptional Trees by Size	23
Total Viable Exceptional Trees	12
Total Viable Exceptional Retain	5
Total Viable Exceptional Remove	7

Tree Viability & Retention

I performed a Level 2 Visual Tree Assessment (VTA) of the 56 trees on the subject property. Each tree was visually inspected from the ground to identify health and structural condition. Each tree was then assigned a condition rating based on the criteria[1] listed in Table 3 below. Based on the condition ratings assigned, each tree was then assigned a viability rating as shown in Table 4 below.

Of the 56 total trees, 34 were found to be **not viable** due to having poor health and/or structure. Throughout the site, many trees exhibited advanced canopy decline due to insufficient access to sunlight and heavy invasive ivy (*Hedera* spp.) coverage. There were several trees that were nearly 100-percent covered in ivy vines with only small amounts of living foliage. Additionally, there was a high presence of the decay-causing fungus *Kretzschmaria deusta* on the trunks of mature bigleaf maple (*Acer macrophyllum*). This fungus, commonly referred to as Brittle Cinder Fungus, decays the flexible cellulose in trees leaving the more brittle lignin behind which can result in tree breakage or failure.

Fourteen pacific madrone (*Arbutus menziesii*) trees are present on the site; six of which were in poor health and/or structural condition. Canopy decline was evident on many of the madrone trees which is a common symptom throughout the Seattle Region. I also observed cankers on the trunks of most of the madrone trees, which is likely due to the fungus *Neofusicoccum arbuti*.

Table 3. Health & Structural Condition Ratings

CONDITION RATING	TREE HEALTH *Consider crown indicators — including vigor, density, leaf size, quality, and stem shoot extensions.*	TREE STRUCTURE *Consider root condition/formation, trunk condition, and branch assembly and arrangement.*
Excellent	Perfect specimen with excellent form and vigor, along with a well-balanced crown. Trunk is sound and solid. No apparent pest problems. Normal to exceeding shoot length on new growth. Normal leaf size and color. Exceptional life expectancy for the species.	Root plate undisturbed and clear of any obstructions. Trunk flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.
Good	Imperfect canopy density in 10% or less of the tree. Lacks natural symmetry. Less than half the normal growth rate and minor deficiency in leaf development. Few pest issues or damage, and controllable if present. Normal branch and stem development with healthy growth. Typical life expectancy for the species.	Root plate appears normal, with only minor damage. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure and less than 25% of bark section missing. Good branch habit; minor dieback with some signs of previous pruning. Codominant stem formation may be present, requiring minor corrections.
Fair	Crown decline and dieback up to 30% of the canopy. Poor overall symmetry. Leaf size smaller and color somewhat chlorotic. Shoot extensions indicate some stunting and stressed growing conditions. Obvious signs of pest problems contribute to a lesser condition. Some decay areas found in the main stem and branches. Below-average life expectancy for the species.	Root plate reveals previous damage or disturbance. Dysfunctional roots may be visible around the main stem. Evidence of trunk damage or cavities, with decay or defects present and less than 30% of bark sections missing on trunk. Co-dominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.
Poor	Lacking a full crown, with more than 50% decline and dieback that especially affects larger branches. Stunting obvious, with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe. Extensive decay or hollow characteristics. Low life expectancy for the species.	Root plate disturbance and defects indicate major damage, with girdling roots around the trunk flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important branches dead or broken. Canopy reveals signs of damage or previous topping or lion-tailing, with major corrective action required.

[1] Purcell, L. and Ling, J. (2019) *Tree appraisal and the value of trees - extension - purdue extension*, *Purdue Extension Forestry and Natural Resources*. Available at: https://www.extension.purdue.edu/extmedia/FNR/FNR-473-W.pdf (Accessed: 03 August 2023).

Table 4. Tree Viability Ratings

TREE STRUCTURE	TREE HEALTH			
	Excellent	**Good**	**Fair**	**Poor**
Excellent	Viable	Viable	Viable	**Not Viable**
Good	Viable	Viable	Viable	**Not Viable**
Fair	Viable	Viable	**Not Viable**	**Not Viable**
Poor	**Not Viable**	**Not Viable**	**Not Viable**	**Not Viable**

Exceptional Tree Viability

Twenty-three trees that meet or exceed the Exceptional tree criteria per City of Mercer Island exist on the site. Species include Douglas-fir (*Pseudotsuga menziesii*), bigleaf maple, pacific madrone, western redcedar (*Thuja plicata*), and native willow (*Salix* sp.).

Twelve of the Exceptional trees were determined to be **viable** and in good to fair health and/or structural condition. The additional 11 trees were in varying stages of decline and are unlikely to be good long-term trees adjacent to new development and were rated as **not viable**. See Table 5 below with detailed information on each exceptional tree and justification for removal per MICC 19.10.060(a)(3).

Table 5. Exceptional Tree Info & Justification for Removal per MICC

Tree ID	Common Name	DSH (in)	Health/ Structure	Viable	Proposed Action	Field Notes	MICC 19.10.060(a)(3) Justification
4	Douglas-fir	41.5	Good/Fair	Yes	Retain	Dominant tree, trunk sweep to north	N/A – retained
5	Madrone	14.6	Good/Good	Yes	Retain	Minor dieback, stable condition	N/A – retained
11	Madrone	11.9	Poor/Poor	No	Remove	Top broken, small canopy, decay present	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
12	Madrone	18.9	Poor/Fair	No	Remove	Dying	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
18	Madrone	20.1	Poor/Fair	No	Remove	Tree completely suppressed, large 5" ivy vines on trunk with minimal live canopy remaining	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
26	Douglas-fir	38.6	Good/Good	Yes	Remove	Dominant tree with extensive ivy on trunk, nearly 90% live crown ratio	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
27	Bigleaf Maple	32.9	Fair/Poor	No	Remove	Very narrow codominant union at base with large seam of included bark, *K. deusta* at union, more than 50% canopy dieback and evident decay present in central columns	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation

Table 5 continued

Tree ID	Common Name	DSH (in)	Health/ Structure	Viable	Proposed Action	Field Notes	MICC 19.10.060(a)(3) Justification
28	Western Redcedar	39.1	Fair/Good	Yes	Remove	Canopy slightly thin and chlorotic	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
29	Madrone	10.4	Poor/Fair	No	Remove	In state of decline, cankers	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
33	Madrone	28.1	Good/Good	Yes	Remove	Leans west, dominant tree	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
35	Bigleaf Maple	31.6	Fair/Poor	No	Remove	Growing on nurse stump, *K. deusta*	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
40	Madrone	7.5	Fair/Fair	Yes	Retain	Strong lean over Island Crest Way, lightly topped, cankers on trunk	N/A - retained
41	Madrone	10.9	Fair/Fair	Yes	Retain	Previously topped for utilities, overall in stable condition, minimal cankers on trunk	N/A - retained
43	Madrone	9.6	Fair/Fair	Yes	Retain	Central trunk dying, cankers on trunk beginning to form, previously topped, not good long-term tree but retention possible	N/A - retained
47	Madrone	10.3	Poor/Poor	No	Remove	Trunk cankers, very poor form from previous topping	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
54	Madrone	13.9	Good/Good	Yes	Remove	Overall healthy canopy	**MICC 19.10.060.a.3.c:** Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
55	Bigleaf Maple	32.0	Good/Fair	Yes	Remove	Ivy on trunk, dominant tree with three narrowly attached trunks at about 20 feet	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
56	Bigleaf Maple	36.9	Poor/Fair	No	Remove	Substantial canopy dieback, top is dead, over 50% dead overall	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
58	Willow (native)	9.5	Poor/Poor	No	Remove	Ivy vines, broken top	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
59	Willow (native)	9.2	Poor/Poor	No	Remove	Ivy vines, swept base, leans over utilities	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation

Table 5 continued

Tree ID	Common Name	DSH (in)	Health/ Structure	Viable	Proposed Action	Field Notes	MICC 19.10.060(a)(3) Justification
63	Madrone	25.2	Good/Good	Yes	Remove	Dominant tree with typically issues of mature madrone trees	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title
64	Madrone	8.5	Poor/Poor	No	Remove	Dying, 30% branch dieback	**MICC 19.10.060.a.3.a:** Unavoidable hazardous situation
68	Madrone	18.1	Fair/Good	Yes	Remove	Growing with trunk of a tree #67, touching and wrapping around trunk of #68, some dieback observed	**MICC 19.10.060.a.3.b and c:** Limits gross floor area to less than 85% of the maximum gross floor area allowed under chapter 19.02 MICC Prevents creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title

Viable Exceptional Tree Impact & Removal Assessment

Tree #s 26, 28, 33, 54, 55, 63, 68 are viable Exceptional trees that are proposed for removal. As part of this project, an analysis was conducted to determine whether adjustments to site plans could be made to preserve these trees. Detailed explanations are provided below.

Tree #26 – is located between proposed Lots 3 and 4. This tree is located in the centerline of the site where an access road and stormwater detention tank is proposed. Alternative options were explored, such as clustering the lots and reducing setbacks. However, due to the large size of this tree, even with these adjustments tree protection would not be adequate. While this species of tree (Douglas-fir) has a moderate to high tolerance to development impacts[2], a minimum Tree Protection Zone (TPZ) of 20 to 25 feet, or 6 to 8 times the trunk diameter, is required to safely preserve a tree of this size.[3] Due to this, there was no feasible alternate location for the site access and stormwater detention tank and pipe that would support retention.

Tree #28 – is a dominant western redcedar tree located between proposed Lots 1 and 2. Impacts to this tree include the hammerhead turnaround and storm drainpipe. This species of tree has a relatively low tolerance to construction impacts and is particularly affected by changes to soil hydrology. I observed early symptoms of canopy stress, as is more common throughout the region for this species of tree, and even if the stormwater pipe could be realigned it is unlikely to survive impacts. While it may be feasible to shift the footprint of Lot 1 further north and reduce the setback, impacts from Lot 2 construction would be substantial and there is no alternative location for this building footprint that would not require removal of additional trees.

[2] Matheny, N. and Clark, J.R. (2000) *Trees and development: A technical guide to preservation of trees during land development*. Champaign, IL: International Society of Arboriculture.

[3] Fite, K. and Smiley, E.T. (2016) Managing trees during construction. 2nd edn. Atlanta, GA: International Society of Arboriculture.

Tree #33 – is a pacific madrone tree located in the northeast corner of the proposed building footprint for Lot 4. Impacts to this tree include the building pad for Lot 4, as well as impacts from construction of the access road, stormwater detention tank and water and sewer lines. Water and sewer were relocated to this area to avoid impacts along the northern property line which allows retention of Tree #s 3, 4, and 5. Shifting the footprint on Lot 4 to the west and reducing the setback would not provide this tree with adequate space for protection.

Tree #54 – this tree is a smaller madrone tree (14") that is located just south of the Lot 2 building approximately 5 feet from the proposed building footprint. No alternate locations for the home on Lot 2 are feasible due to the stormwater infrastructure and access turnaround requirements to the north.

Tree #55 – tree #55 is located within proposed Lot 4 and is currently about 3 feet from the proposed building footprint. This is a dominant bigleaf maple tree with multiple codominant trunk attachments about 20 feet up the trunk. For this size of tree, a minimum TPZ of about 20-feet is recommended (8 times the trunk diameter). If the proposed house was shifted to the west, the greatest TPZ attainable is approximately 10 feet, not including over-excavation for the home.

Tree #63 – this tree is located at the southeast corner of proposed Lot 1. Impacts include construction of the footprint for Lot 1, construction of the access road and hammerhead, impacts from stormwater infrastructure and site grading. Pacific madrones have a poor tolerance to construction damages[4] and would require a minimum TPZ of 20 to 26 feet (10 to 12 times the trunk diameter) to be successfully retained.[5] Due to the required improvements for access and utilities, there are no alternate layouts that would achieve this protection area.

Tree #68 – this tree is located along the eastern edge of the proposed building footprint for Lot 1. The tree is wrapping around the trunk of Tree #67, which is a declining maple tree, and would be challenging to safely retain with the removal of the maple tree. Additionally, the house footprint for Lot 1 cannot feasibly shift west to accommodate this tree without impacting the slope along Island Crest Way.

Tree Grove Analysis

The City of Mercer Island defines a Tree Grove as a group of eight or more trees each ten inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree.

Due to the high number of declining and hazardous trees on the site, there are no intact tree groves that meet this definition.

A grove analysis was conducted of four areas on the site that consist of multiple viable trees with overlapping canopies.

[4] Matheny, N. and Clark, J.R. (2000) *Trees and development: A technical guide to preservation of trees during land development*. Champaign, IL: International Society of Arboriculture.

[5] Fite, K. and Smiley, E.T. (2016) Managing trees during construction. 2nd edn. Atlanta, GA: International Society of Arboriculture.

Analysis #1: Southwest corner of site. Viable tree #s 40, 41, 43, 49, 50, 52.

Conclusion: While this area has a dense concentration of trees, there are only six viable trees with overlapping canopies (see Figure 1).

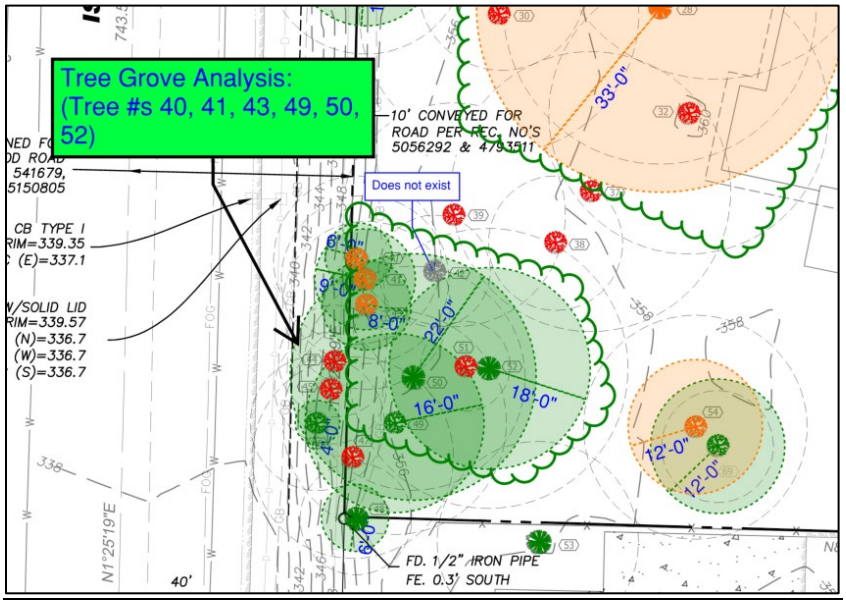

Figure 1. Tree Grove Analysis #1

Analysis #2: Central area of site near Lots 1 and 2. Viable tree #s 28, 63, 68,

Conclusion: While this area has a dense concentration of trees, there are only three viable trees with overlapping canopies (see Figure 2).

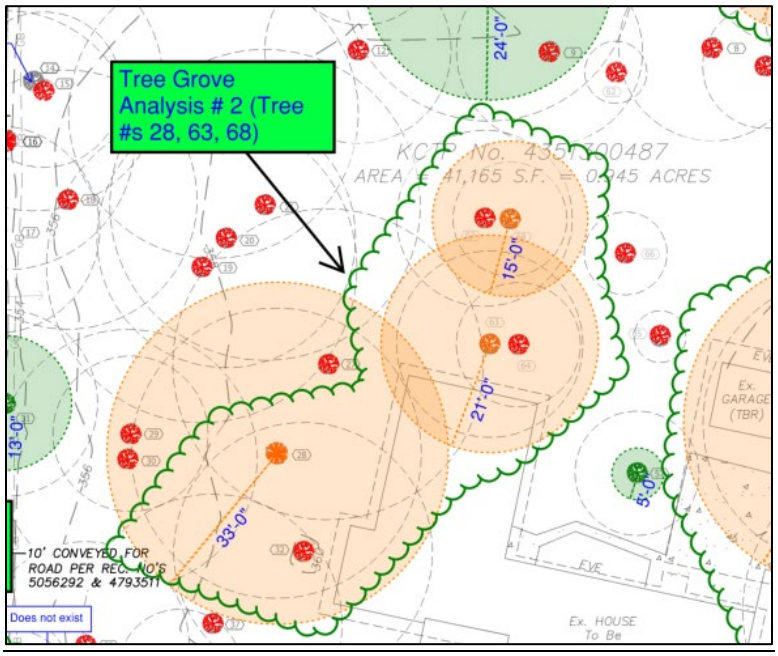

Figure 2. Tree Grove Analysis #2

Analysis #3: Northeast corner of site near Lot 3. Viable tree #s 3, 4, 5.

Conclusion: There are only three viable trees with overlapping canopies (see Figure 3).

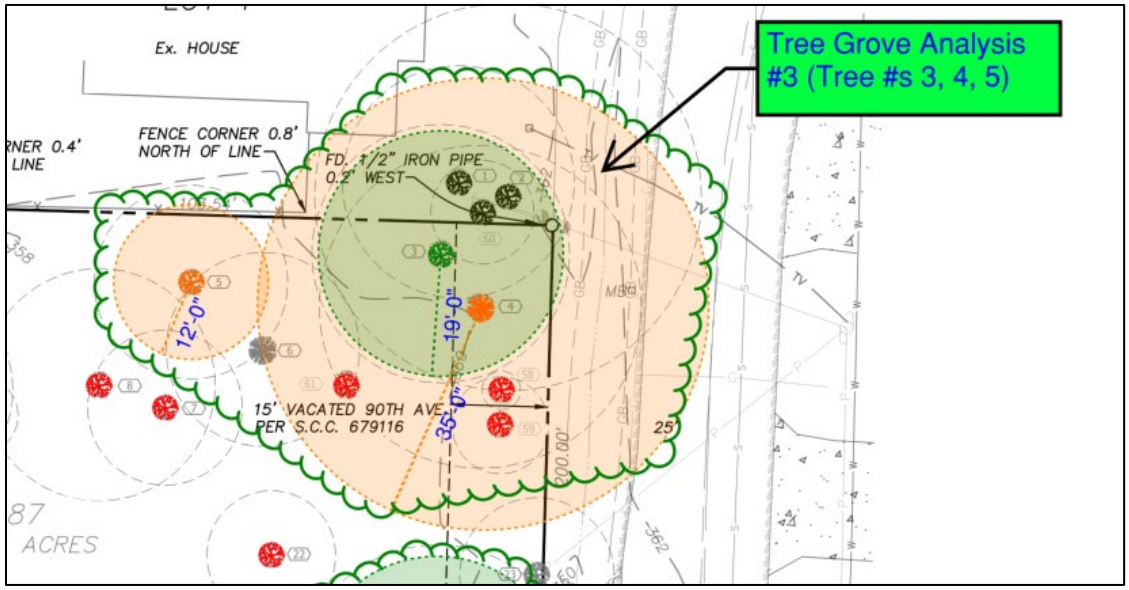

Figure 3. Tree Grove Analysis #3

Analysis #4: Southeast corner of site near Lot 4. Viable tree #s 24, 26, 33, 36, 55.

Conclusion: There are only five viable trees with overlapping canopies (see Figure 4).

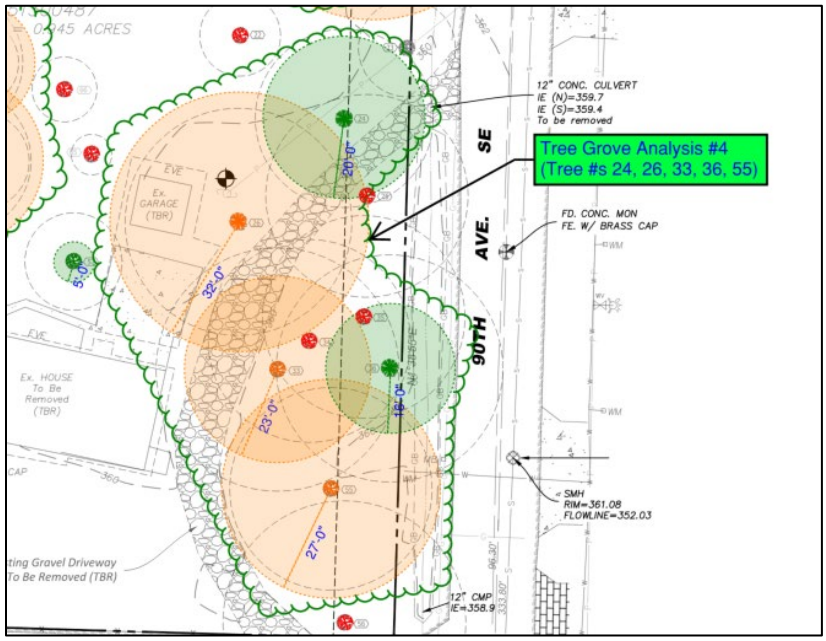

Figure 4. Tree Grove Analysis #4

Proposed Tree Impacts & Protection Specifications

This project proposes to retain 10 viable trees; 5 of which are Exceptional. To ensure viability, detailed tree protection measures shall be implemented throughout the duration of this project. Please refer to the Tree Retention Plan, sheet TR-01, for more information on tree protection measures.

Table 6. Tree Protection Specifications for Retained Trees

Proposed Impact / Tree Numbers	**Specifications**
General – all retained trees	1. Tree Protection Fence: shall be installed as shown on the Tree Protection Plan and consist of 6-foot tall chain-link fencing. Fencing shall be installed on concrete footings and securely attached by clamping the panels together. 2. Tree Protection Signage: plastic laminate signs shall be affixed to the fencing in 15 foot intervals using zip ties or wire stating "Tree Protection Area – Keep Out". 3. No work, excavation, trenching, material storage, cleaning or dumping shall occur behind the tree fencing. 4. All invasive and other vegetation removed within the driplines of the trees shall be done mainly by hand or using small machinery only. 5. Under no circumstances shall the grade be lowered within the Tree Protection Fencing area.
Tree #s 3, 4, 5 Construction of Lot 3 building foundation Removal of existing vegetation	6. Excavation within the driplines of these 3 trees shall be done using pneumatic excavation or hydro-excavation under supervision by the Project Arborist. 7. The Project Arborist shall document and instruct construction crews to cleanly cut all encountered roots. 8. Roots that are exposed shall be covered in wet burlap until the foundation is poured and the trench is backfilled.
Tree #s 40, 41, 43, 49, 50, 69 Construction of Lot 2 building foundation Removal of existing vegetation	9. Soil protection shall be installed along the south side of the building footprint to protect from heavy machinery (see Tree Protection Plan). Soil protection shall consist of three-quarter inch plywood on top of 5-inches of woodchip mulch. 10. Excavation for the building foundation within the dripline of trees shall be done using a flat-fronted bucket to avoid unnecessary ripping/tearing of roots. 11. Roots encountered that are greater than 2-inches diameter shall be documented and cleanly cut. 12. The stumps of tree #s 47, 51, 52, 54 shall be left in place and not ripped from the ground with heavy machinery.

Tree Replacement & Replanting Plan

The City of Mercer Island requires the replacement of all trees removed. Replacement trees must be a minimum of 6-feet tall for conifer trees and 1.5-inches caliper for deciduous trees. Tree replacement requirements per MICC 19.10.070 are as follows:

Table 7. Tree replacement requirements per MICC 19.10.070

Diameter of removed tree	Number of replacement trees required
Less than 10 inches	1
10 inches up to 24 inches	2
24 inches up to 36 inches	3
More than 36 inches and any exceptional trees	6

For this project, a total of 46 trees are proposed for removal; 12 of which are viable. Replacement requirements for all 46 trees removed is equal to 156 replacement trees (Table 8). The total replacement trees required for only the viable trees removed from the site is equal to 52 trees (Table 9). This project proposes to install 90 replacement trees, including 52 native trees (see Tree Planting Plan, sheet TR-02).

The City's tree ordinance does not explicitly state that non-viable trees do not require replacement; however, due to the substantial replanting proposed and declining condition of many trees throughout the site, I recommend requesting that the City waive the fee-in-lieu requirements for the additional 66 trees required for non-viable trees (156 total trees minus 90 proposed replacement trees).

Table 8. Total replacement tree requirements

Diameter of removed tree	# of trees removed	# of replacement trees	Total replacement trees required
Less than 10 inches	7	1	7
10 inches up to 24 inches	19	2	38
24 inches up to 36 inches	3	3	9
More than 36 inches and any exceptional trees	17	6	102
Total Replacement Trees			**156**

Table 9. Replacement tree requirements for viable trees only

Diameter of removed tree	# of viable trees removed	# of replacement trees	Total replacement trees required
Less than 10 inches	1	1	1
10 inches up to 24 inches	3	2	6
24 inches up to 36 inches	1	3	3
More than 36 inches and any exceptional trees	7	6	42
Total Replacement Trees (viable only)			**52**

PHOTOGRAPHS

Photo 1. Tree # 6, dying.

Photo 2. Tree #s 11, 12, dying/dead.

Photo 3. Tree #15 covered in ivy vines and dying.

Photo 4. Tree #19 with one dead trunk.

Photo 5. Tree #21 with dead top.

Photo 6. Tree # 22, dying.

Photo 7. Typical madrone cankers observed throughout the site.

Photo 8. Tree #27 with decaying and dead trunk.

Photo 9. K. deusta on trunk of Tree #27.

Photo 10. Tree # 28, cedar with thinning canopy.

Photo 11. Broken stem of Tree #30.

Photo 12. Narrow union of Tree #32.

Photo 13. K. deusta on Tree #32.

Photo 14. Tree # 34 with decayed trunks.

Photo 15. Tree #37 with canopy decline.

Photo 16. Tree # 38 with dead top.

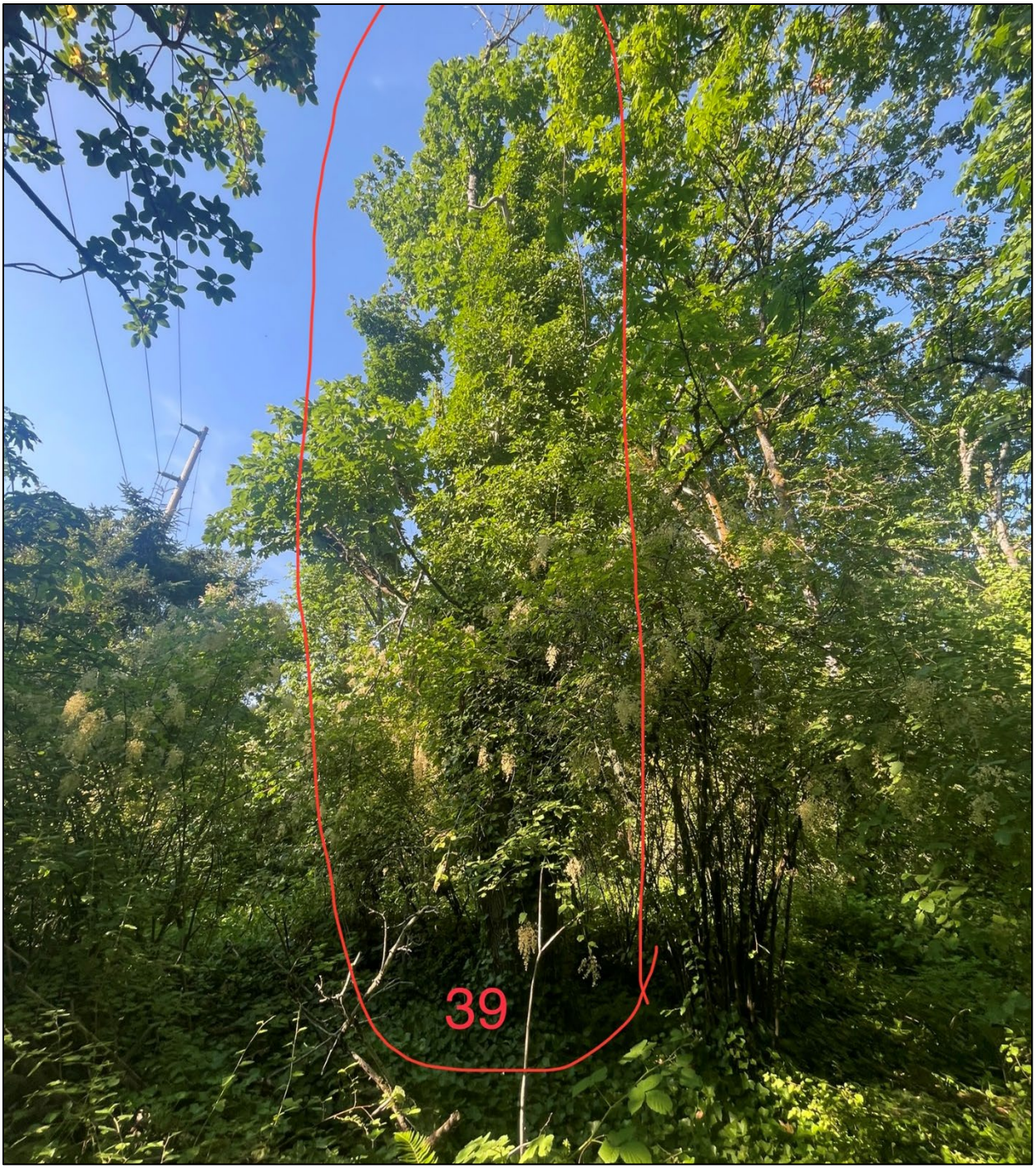

Photo 17. Tree #39 dying with heavy ivy.

Photo 18. Tree #49 with hollow trunk.

Photo 19. Tree #51 with substantial decay.

Photo 20. Tree #66 with dead top.

Photo 21. Tree #s 67 (dying/dead) and 68.

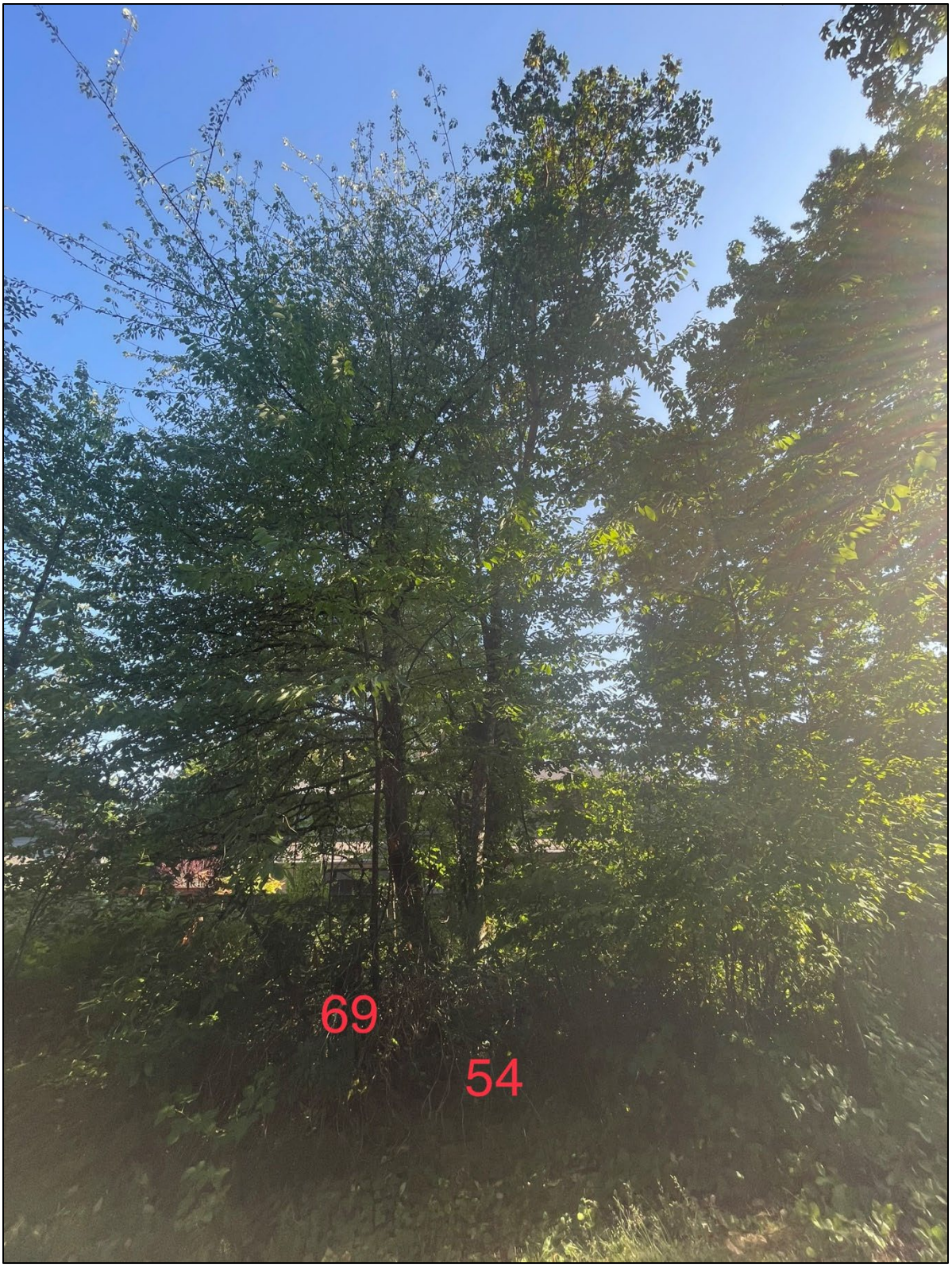

Photo 22. Tree #69 is proposed for retention on Lot 2.

Photo 23. Looking southwest toward cluster of trees in southwest corner of proposed Lot 2.

Attachments

1) Glossary
2) References
3) Inspection Methods
4) Appendix A – Assumptions & Limiting Conditions
5) Appendix B – Certification of Performance
6) Tree Inventory Table
7) Tree Retention Plan (TR-01)
8) Tree Planting Plan (TR-02)

GLOSSARY

ANSI A300: American National Standards Institute (ANSI) standards for tree care
Chlorotic: discoloration caused by lack of chlorophyll in the foliage
Codominant Stems: two or more stems (or leaders) of relatively similar size that emerge from the same location on the main trunk (Gilman, 2002)
Conifer: a tree that bears cones and has evergreen needles or scales
Crown: the above ground portion of the tree comprised of branches and their foliage
Crown raise pruning: a pruning technique where the lower branches are removed, thus raising the overall height of the crown from the ground
DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade
Deciduous: tree or other plant that loses its leaves annually and remains leafless generally during the cold season
Epicormic: arising from latent or adventitious buds
Evergreen: tree or plant that keeps its needles or leaves year-round; this means for more than one growing season
Increment: the amount of new wood fiber added to a tree in a given period, normally one year.
ISA: International Society of Arboriculture
Landscape function: the environmental, aesthetic, or architectural functions that a plant can have
Lateral: secondary or subordinate branch
Limits of disturbance: The boundary of minimum protection around a tree, the area that cannot be encroached upon without possible permanent damage to the tree. It is a distance determined by a qualified professional and is based on the age of the tree, its health, the tree species tolerance to disruption and the type of disturbance. It also considers soil and environmental condition and previous impacts. It is unique to each tree in its location.
Limited visual assessment: a visual assessment from a specified perspective such as foot, vehicle, or aerial (airborne) patrol of an individual tree or a population of trees near specified targets to identify specified conditions or obvious defects (ISA 2013)
Live crown ratio: the percentage of living tissue in the canopy versus the tree's height. It is a good indicator of overall tree health and the trees growing conditions. Trees with less than a 30% crown ratio often lack the necessary quantity of photosynthetic material to sustain the roots; consequently, the tree may exhibit low vigor and poor health
Monitoring: keeping a close watch; performing regular checks or inspections
Owner/manager: the person or entity responsible for tree management or the controlling authority that regulates tree management
Pathogen: causal agent of disease
Phototropic growth: growth toward light source or stimulant
ROW: right-of-way; generally referring to a tree that is located offsite on a city easement
Reaction wood: specialized secondary xylem which develops in response to a lean or similar mechanical stress, it serves to help restore the stem to a vertical position
Self-corrected lean: a tree whose trunk is at an angle to the grade but whose trunk and canopy changes to become upright/vertical
Significant tree: a tree measuring a specific diameter determined by the municipality the tree grows in. Some municipalities deem that only healthy trees can be significant, other municipalities consider both healthy and unhealthy trees of a determined diameter to be significant
Snag: a tree left partially standing for the primary purpose of providing habitat for wildlife
Soil structure: the size of particles and their arrangement; considers the soil, water, and air space

Sounding: process of striking a tree with a mallet or other appropriate tool and listening for tones that indicate dead bark, a thin layer of wood outside a cavity, or cracks in wood
Structural defects: flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure; may be genetic, or environmental
Tree credit: a number assigned to a tree by a municipality that may be equal to the diameter of the tree or a numerical count of the tree, or related to diameter by a factor conveyed in a table of the municipal code
Trunk area: the cross-sectional area of the trunk based upon measurement at 54 inches (4.5 ft.) above grade
Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, et al 1999) detailed visual inspection of a tree and surrounding site that may include the use of simple tools. It requires that a tree risk assessor walk completely around the tree trunk looking at the site, aboveground roots, trunk, and branches (ISA 2013)

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INSPECTION METHODS

I performed a Level 2 Visual Tree Assessment (VTA) for each tree. I visually inspected the tree from the ground, walking around the tree to inspect for any basal defects. I then positioned myself further from the tree, looking up into the crown and branches for any notable defects and symptoms of canopy decline.

Using the VTA method, I rated the health and structural condition of each tree. This inspection method is an international industry standard for assessing trees from the ground level and identifies external signs of decay, physical damage, growth related defects, and abnormal or declining foliage. Tree health and structure are each assigned their own condition rating. The following ratings are used:

Poor: Lacking a full crown, with more than 50% decline and dieback that especially affects larger branches. Low life expectancy for the species.

Fair: Crown decline and dieback up to 30% of the canopy. Below-average life expectancy for the species.

Good: Imperfect canopy density in 10% or less of the tree. Typical life expectancy for the species.

Excellent: Perfect specimen with excellent form and vigor, along with a well-balanced crown. Exceptional life expectancy for the species.

APPENDIX A - ASSUMPTIONS & LIMITING CONDITIONS

1) Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2) It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3) The assessment in this report is based on information and data from sources believed to be reliable, correct, and accurately reported. No responsibility is assumed for false or misleading information provided by others.
4) The consultant/appraiser shall not be required to give testimony or to attend court by reason of the report unless subsequent contractual arrangements are made including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5) Loss or alteration of any part of this report invalidates the entire report.
6) Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.
7) Neither all nor any part of the contents of the report, nor copy thereof, shall be conveyed by anyone, including the client to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser – particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or instate or to any initialed designation conferred upon the consultant/appraiser as stated in her qualification.
8) The report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of subsequent event, nor upon any finding to be reported.
9) Sketches, diagrams, graphs, and photographs in this report, being intended as visual aid, are not necessarily to scale and should not be construed as engineering or architectural reports or survey.
10) Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. There is not warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

APPENDIX B - CERTIFICATION OF PERFORMANCE

I, Katie Hogan, certify that:

- I have personally inspected the trees on the property referenced in this report and the statements of fact contained in this report are true and correct.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved.
- The reported analysis, opinions, and conclusions are my personal, unbiased professional analysis, opinions, and conclusions.
- My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural best practices.
- No individuals or organizations have provided significant assistance with the preparation of this report, except those named in the report.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined outcome or direction that favors the cause of the client, the results of the assessment, or the occurrence of any subsequent events.

Signed:

Cascara Tree Consulting, LLC

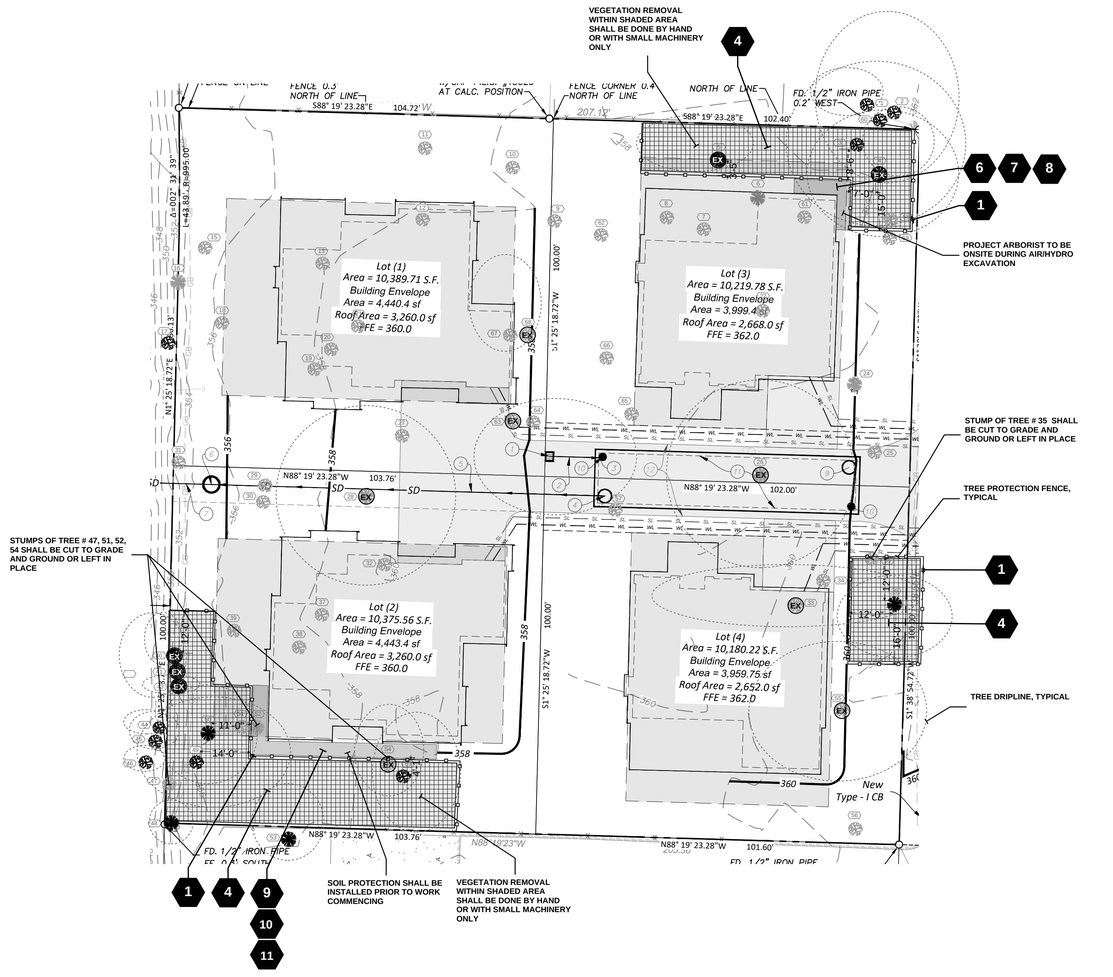
4833 90th Ave NE, Mercer Island

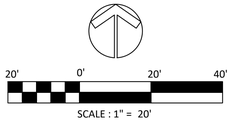
Tree Inventory Table

Prepared by: Cascara Tree Consulting
8/4/2023

							Dripline (ft)							
Tree No.	Scientific Name	Common Name	DBH (inches)	Health	Structure	Viable	N	E	S	W	Exceptional Size	Exceptional?	Proposed Action	Notes
3	*Acer macrophyllum*	*Bigleaf Maple*	22.5	Good	Good	Yes	22	30	22	20	30		Retain	
4	*Pseudotsuga menziesii*	*Douglas-fir*	41.5	Good	Fair	Yes	18	22	18	20	30	Exceptional - Size	Retain	Sweep to north
5	*Arbutus menziesii*	*Madrone*	14.6	Good	Good	Yes	12	10	0	24	6	Exceptional - Size	Retain	Stable condition
6	*Thuja plicata*	*Western Redcedar*	27.0	Poor/Dead	Fair	Removed	0	0	0	0	30	-	-	Previously removed, hollow trunk with rams horns, log on ground is hollow, tree was 70% dead prior to removal
7	*Acer macrophyllum*	*Bigleaf Maple*	7.5	Fair	Poor	No	0	15	11	6	30		Remove	Leans, broken top
8	*Acer macrophyllum*	*Bigleaf Maple*	12.1	Poor	Poor	No	0	18	0	16	30		Remove	Asymmetric, leans south
9	*Acer macrophyllum*	*Bigleaf Maple*	20.9	Poor	Poor	No	0	14	0	28	30		Remove	Hollow, top broken
10	*Populus trichocarpa*	*Black cottonwood*	28.7	Good	Good	Yes	36	30	26	36	-		Remove	Ivy vines, not good long-term tree for site due to species and size
11	*Arbutus menziesii*	*Madrone*	11.9	Poor	Poor	No	2	4	4	0	6	Not Viable	Remove	Top broken, small canopy, minor decay
12	*Arbutus menziesii*	*Madrone*	18.9	Poor	Fair	No	30	0	6	6	6	Not Viable	Remove	Dying, dead limbs
13	*Acer macrophyllum*	*Bigleaf Maple*	19.5	Fair	Fair	No	20	14	24	22	30		Remove	Nearly 100% covered in ivy, southern quadrant of canopy and top of tree is dying back, very narrow union at base, trunks are touching, column of decay on west side of trunk
14	*Acer macrophyllum*	*Bigleaf Maple*	12.0	Fair	Poor	Removed	0	0	0	0	30	-	-	Previously removed, east trunk completely failed at base due to *Kretzschmaria deusta* and advanced decay. Westernmost trunk was then removed (diameter ~12 inches). Maple was growing on a decayed nurse stump.
15	*Acer macrophyllum*	*Bigleaf Maple*	14.5	Poor	Fair	No	6	4	4	4	30		Remove	Completely dead and covered in ivy vines
16	*Pseudotsuga menziesii*	*Douglas-fir*	17.5	Fair	Poor	No	14	17	8	18	30		Remove	Previously topped with visible decay at old topping wound, very poor long-term form, not ideal long-term tree
18	*Arbutus menziesii*	*Madrone*	20.1	Poor	Fair	No	6	8	12	12	6	Not Viable	Remove	Tree completely suppressed, large 5 inch ivy vines on trunk with minimal live canopy remaining
19	*Acer macrophyllum*	*Bigleaf Maple*	19.6	Fair	Poor	No	8	20	4	22	30		Remove	Very narrow trunk attachment at base, staining on north trunk - possibly fungal, north trunk is completely dead, remaining trunk has dead top and additional dieback throughout
20	*Ilex aquifolium*	*English holly*	12.7	Good	Good	No	16	16	16	16	-		Remove	Invasive species not recommended for retention
21	*Acer macrophyllum*	*Bigleaf Maple*	21.2	Poor	Fair	No	30	8	4	4	30		Remove	North trunk is nearly dead with top dieback, south trunk is also completely dead except for one small sprout
22	*Alnus rubra*	*Red alder*	12.2	Poor	Fair	No	8	24	0	24	-		Remove	Top dieback, nearly 100% covered and ivy vines
23	*Alnus rubra*	*Red alder*	19.0	Fair	Poor	Removed	0	0	0	0	-	-	-	Stump found - diameter ~19 inches cut at 1.5 feet above ground, tree was previously topped and was a living snag
24	*Thuja plicata*	*Western Redcedar*	23.5	Good	Good	Yes	16	16	16	16	30		Remove	
25	*Acer macrophyllum*	*Bigleaf Maple*	19.6	Fair	Fair	No	20	20	20	18	30		Remove	Three stems at based with narrow unions, visible dieback throughout canopy, not good long-term tree
26	*Pseudotsuga menziesii*	*Douglas-fir*	38.6	Good	Good	Yes	26	26	26	26	30	Exceptional - Size	Remove	Dominant Douglas fir tree with extensive ivy on trunk, nearly 90% live crown ratio
27	*Acer macrophyllum*	*Bigleaf Maple*	32.9	Fair	Poor	No	28	28	34	30	30	Not Viable	Remove	Very narrow codominant union at base with large seam of included bark,*Kretzschmaria deusta* observed at union, more than 50% canopy dieback and evident decay present in central columns
28	*Thuja plicata*	*Western Redcedar*	39.1	Fair	Good	Yes	24	24	24	24	30	Exceptional - Size	Remove	Canopy slightly thin and chlorotic, species is intolerant of changes to soil conditions and level of protection needed to successfully retain tree would make site on buildable
29	*Arbutus menziesii*	*Madrone*	10.4	Poor	Fair	No	24	6	18	0	6	Not Viable	Remove	In a state of decline, cankers on trunk
30	*Acer macrophyllum*	*Bigleaf Maple*	20.0	Fair	Poor	No	24	18	16	16	30		Remove	10 inch diameter trunk failed at codominant union, significant decay evident throughout tree
31	*Pseudotsuga menziesii*	*Douglas-fir*	15.5	Good	Fair	Yes	14	14	14	14	30		Remove	Topped for utilities
32	*Acer macrophyllum*	*Bigleaf Maple*	28.3	Fair	Fair	No	18	30	28	28	30		Remove	Visible branch dieback ~ 10 to 20% on southside of canopy,*Kretzschmaria deusta* observed at lower codominant union, multiple weak attachments
33	*Arbutus menziesii*	*Madrone*	28.1	Good	Good	Yes	12	35	0	40	6	Exceptional - Size	Remove	Leans to the west, dominant madrone tree
34	*Acer macrophyllum*	*Bigleaf Maple*	25.1	Fair	Fair	No	14	18	0	25	30		Remove	Smaller codominant is dead, large column of decay in trunk with visible areas of significant decay
35	*Acer macrophyllum*	*Bigleaf Maple*	31.6	Fair	Poor	No	28	32	20	26	30	Not Viable	Remove	Growing on nurse stump, *Kretzschmaria deusta*
36	*Cedrus deodara*	*Deodar Cedar*	19.4	Good	Good	Yes	7	16	16	16	30		Retain	One sided canopy Island Crest Way
37	*Acer macrophyllum*	*Bigleaf Maple*	17.6	Fair	Fair	No	30	20	6	28	30		Remove	Visible dieback in approximately 1/4 of the canopy, cavities and decay columns observed
38	*Acer macrophyllum*	*Bigleaf Maple*	7.1	Poor	Poor	No	0	16	16	0	30		Remove	Nearly 100% dead
39	*Acer macrophyllum*	*Bigleaf Maple*	21.2	Fair	Fair	No	14	6	6	6	30		Remove	In a state of decline with top dieback, heavily pruned on one side for utilities, stunted growth
40	*Arbutus menziesii*	*Madrone*	7.5	Fair	Fair	Yes	12	2	0	10	6	Exceptional - Size	Retain	Strong lean over Island Crest Way, lightly topped, cankers on trunk
41	*Arbutus menziesii*	*Madrone*	10.9	Fair	Fair	Yes	16	0	6	16	6	Exceptional - Size	Retain	Previously topped for utilities, but overall in decent condition, minimal cankers on trunk

42	*Arbutus menziesii*	*Madrone*	-	-	-	-	6	0	0	16	6		-	Does not exist, likely inaccurate inventory, remove from survey
43	*Arbutus menziesii*	*Madrone*	9.6	Fair	Fair	Yes	2	6	2	10	6	Exceptional - Size	Retain	Central trunk dying, cankers on trunk beginning to form, previously topped, not good long-term tree
47	*Arbutus menziesii*	*Madrone*	10.3	Poor	Poor	No	6	5	0	12	6	Not Viable	Remove	Trunk cankers, very poor form from previous topping
49	*Acer macrophyllum*	*Bigleaf Maple*	18.7	Fair	Fair	Yes	18	26	12	18	30		Retain	Columns of dieback in central canopy and dead branches throughout, codominant at base, previously topped for line clearance, not ideal long-term tree
50	*Pseudotsuga menziesii*	*Douglas-fir*	26.1	Good	Good	Yes	14	14	14	14	30		Retain	Current condition is stable with some minor abnormalities and sunken areas, canopy well-distributed, some dead branches that target in Island Crest Way
51	*Acer macrophyllum*	*Bigleaf Maple*	11.1	Poor	Fair	No	1	0	0	0	30		Remove	Large wound with decay at base
52	*Acer macrophyllum*	*Bigleaf Maple*	21.9	Fair	Fair	Yes	23	28	28	6	30		Remove	Visible central decay with moderate levels of dieback throughout canopy, codominant union at base with slow growth, columns of decay in trunk, not ideal long-term tree
54	*Arbutus menziesii*	*Madrone*	13.9	Good	Good	Yes	16	8	8	8	6	Exceptional - Size	Remove	Overall healthy canopy
55	*Acer macrophyllum*	*Bigleaf Maple*	32.0	Good	Fair	Yes	20	24	20	29	30	Exceptional - Size	Remove	Ivy on trunk, dominant maple tree with three narrowly attached trunks at about 20 feet
56	*Acer macrophyllum*	*Bigleaf Maple*	36.9	Poor	Fair	No	25	30	25	25	30	Not viable	Remove	Substantial canopy dieback, top is dead, over 50% dead overall
57	*Cornus florida*	*Eastern Dogwood*	6.4	Good	Good	Yes	9	9	9	9	12		Remove	
58	*Salix sp.*	*Willow (native)*	9.5	Poor	Poor	No	0	6	3	3	8	Not Viable	Remove	Ivy vines, broken top
59	*Salix sp.*	*Willow (native)*	9.2	Poor	Poor	No	5	8	15	0	8	Not Viable	Remove	Ivy vines, swept base, leans over utilities
61	*Acer macrophyllum*	*Bigleaf Maple*	8.5	Poor	Poor	No	0	3	0	0	30		Remove	Stem broken
62	*Prunus emarginata var. mollis*	*Bitter cherry*	8.5	Fair	Fair	No	12	12	12	12	-		Remove	Canopy thinning and declining
63	*Arbutus menziesii*	*Madrone*	25.2	Good	Good	Yes	0	36	28	10	6	Exceptional - Size	Remove	Dominant canopy stretching over 30 feet radius, tree unlikely to survive construction
64	*Arbutus menziesii*	*Madrone*	8.5	Poor	Poor	No	4	3	24	0	6	Not Viable	Remove	Dying, 30% dead branches
65	*Crataegus monogyna*	*Common hawthorn*	6.1	Good	Good	No	10	12	10	8	-		Remove	Invasive species not recommended for retention
66	*Prunus emarginata var. mollis*	*Bitter cherry*	10.1	Fair	Fair	No	16	8	6	12	-		Remove	Nearly 100% dead
67	*Acer macrophyllum*	*Bigleaf Maple*	15.6	Good	Fair	No	0	12	0	34	30		Remove	Nearly 100% dead
68	*Arbutus menziesii*	*Madrone*	18.1	Fair	Good	Yes	22	0	0	14	6	Exceptional - Size	Remove	Growing with trunk of a tree #67 touching and wrapping around trunk of #68, canopy appears to be in decent condition, care would need to be taken when reducing maple tree #67 and retention may not be possible
69	*Prunus emarginata var. mollis*	*Bitter cherry*	14.8	Good	Good	Yes	18	16	20	8	-		Retain	Condition stable
Off Site Trees														
1	*Acer macrophyllum*	*Bigleaf Maple*	15.4	Good	Good	Yes	10	3	0	16	30		Retain	Asymmetric
2	*Acer macrophyllum*	*Bigleaf Maple*	25.5	Good	Fair	Yes	36	18	20	22	30		Retain	Leans northeast
17	*Acer macrophyllum*	*Bigleaf Maple*	8.4	Good	Poor	No	3	14	10	12	30		Retain	Topped for utilities, overhangs Island Crest Way
44	*Arbutus menziesii*	*Madrone*	5.0	Fair	Fair	No	4	2	0	8	6		Retain	Strong lean over Island Crest Way, substantial cankers on trunk, not ideal long-term tree
45	*Arbutus menziesii*	*Madrone*	7.2	Good	Fair	No	8	4	0	8	6	Not viable	Retain	Young tree in decent condition, previously topped, cankers on trunk are currently minor
46	*Thuja plicata*	*Western Redcedar*	5.0	Good	Good	Yes	4	5	2	6	30		Retain	Young tree, previously topped, overall in decent condition
48	*Pseudotsuga menziesii*	*Douglas-fir*	6.8	Poor	Poor	No	6	6	6	4	30		Retain	Previously topped, small tree
53	*Pseudotsuga menziesii*	*Douglas-fir*	15.0	Good	Fair	Yes	16	10	6	10	30		Retain	Swept
60	*Acer macrophyllum*	*Bigleaf Maple*	10.5	Good	Fair	Yes	0	16	16	0	30		Retain	





LEGEND:

- = TREE PROTECTION FENCE
- 1 = TREE IDENTIFIER
- = TREE REMOVE
- = EXCEPTIONAL TREE REMOVE
- = TREE RETAIN
- = EXCEPTIONAL TREE RETAIN
- 1 = TREE PROTECTION RECOMMENDATIONS **[SEE TABLE 1]**
- = TREE DRIPLINE

TREE TO BE RETAINED

Tree No.	Common Name	DBH (in)	Viable	Dripline Avg (ft)	Proposed Action
3	*Bigleaf Maple*	22.5	Yes	24	Retain
4	*Douglas-fir*	41.5	Yes	20	Retain
5	*Madrone*	14.6	Yes	12	Retain
36	*Deodar Cedar*	19.4	Yes	14	Retain
40	*Madrone*	7.5	Yes	6	Retain
41	*Madrone*	10.9	Yes	10	Retain
43	*Madrone*	9.6	Yes	5	Retain
49	*Bigleaf Maple*	18.7	Yes	19	Retain
50	*Douglas-fir*	26.1	Yes	14	Retain
69	*Bitter cherry*	14.8	Yes	16	Retain
1	*Bigleaf Maple*	15.4	Yes	7	Retain
2	*Bigleaf Maple*	25.5	Yes	24	Retain
17	*Bigleaf Maple*	8.4	No	10	Retain
44	*Madrone*	5.0	No	4	Retain
45	*Madrone*	7.2	No	5	Retain
46	*Western*	5.0	Yes	4	Retain
48	*Douglas-fir*	6.8	No	6	Retain
53	*Douglas-fir*	15.0	Yes	11	Retain
60	*Bigleaf Maple*	10.5	Yes	8	Retain

TREE RETENTION CALCULATIONS	
TOTAL VIABLE TREES	22 TREES
TOTAL RETAINED TREES	10 TREES
TOTAL TREE RETENTION	45%

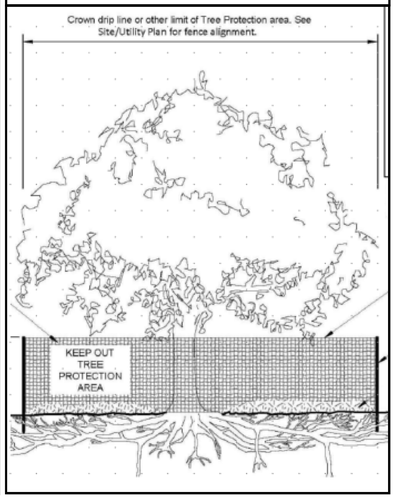
TREES TO BE REMOVED

Tree No.	Common Name	DBH (in)	Viable	Dripline Avg (ft)	Proposed Action
7	*Bigleaf Maple*	7.5	No	8	Remove
8	*Bigleaf Maple*	12.1	No	9	Remove
9	*Bigleaf Maple*	20.9	No	11	Remove
10	*Black*	28.7	Yes	32	Remove
11	*Madrone*	11.9	No	3	Remove
12	*Madrone*	18.9	No	11	Remove
13	*Bigleaf Maple*	19.5	No	20	Remove
15	*Bigleaf Maple*	14.5	No	5	Remove
16	*Douglas-fir*	17.5	No	14	Remove
18	*Madrone*	20.1	No	10	Remove
19	*Bigleaf Maple*	19.6	No	14	Remove
20	*English holly*	12.7	No	16	Remove
21	*Bigleaf Maple*	21.2	No	12	Remove
22	*Red alder*	12.2	No	14	Remove
24	*Western*	23.5	Yes	16	Remove
25	*Bigleaf Maple*	19.6	No	20	Remove
26	*Douglas-fir*	38.6	Yes	26	Remove
27	*Bigleaf Maple*	32.9	No	30	Remove
28	*Western*	39.1	Yes	24	Remove
29	*Madrone*	10.4	No	12	Remove
30	*Bigleaf Maple*	20.0	No	19	Remove
31	*Douglas-fir*	15.5	Yes	14	Remove
32	*Bigleaf Maple*	28.3	No	26	Remove
33	*Madrone*	28.1	Yes	22	Remove
34	*Bigleaf Maple*	25.1	No	14	Remove
35	*Bigleaf Maple*	31.6	No	27	Remove
37	*Bigleaf Maple*	17.6	No	21	Remove
38	*Bigleaf Maple*	7.1	No	8	Remove
39	*Bigleaf Maple*	21.2	No	8	Remove
47	*Madrone*	10.3	No	6	Remove
51	*Bigleaf Maple*	11.1	No	0	Remove
52	*Bigleaf Maple*	21.9	Yes	21	Remove
54	*Madrone*	13.9	Yes	10	Remove
55	*Bigleaf Maple*	32.0	Yes	23	Remove
56	*Bigleaf Maple*	36.9	No	26	Remove
57	*Eastern*	6.4	Yes	9	Remove
58	*Willow (native)*	9.5	No	3	Remove
59	*Willow (native)*	9.2	No	7	Remove
61	*Bigleaf Maple*	8.5	No	1	Remove
62	*Bitter cherry*	8.5	No	12	Remove
63	*Madrone*	25.2	Yes	19	Remove
64	*Madrone*	8.5	No	8	Remove
65	*Common*	6.1	No	10	Remove
66	*Bitter cherry*	10.1	No	11	Remove
67	*Bigleaf Maple*	15.6	No	12	Remove
68	*Madrone*	18.1	Yes	9	Remove

TABLE 1 - ARBORIST RECOMMENDATIONS FOR TREE PROTECTION

PROPOSED IMPACT / TREE NUMBERS	RECOMMENDATIONS
General – All Retained Trees	1. Tree Protection Fence: shall be installed as shown on the Tree Protection Plan and consist of 6-foot tall chain-link fencing. Fencing shall be installed on concrete footings and securely attached by clamping the panels together. 2. Tree Protection Signage: plastic laminate signs shall be affixed to the fencing in 15 foot intervals using zip ties or wire stating "Tree Protection Area – Keep Out". 3. No work, excavation, trenching, material storage, cleaning or dumping shall occur behind the tree fencing. 4. All invasive and other vegetation removed within the driplines of the trees shall be done mainly by hand or using small machinery only. 5. Under no circumstances shall the grade be lowered within the Tree Protection Fencing area.
Tree #s 3, 4, 5 Construction of Lot 3 building foundation Removal of existing vegetation	6. Excavation within the driplines of these 3 trees shall be done using pneumatic excavation or hydro-excavation under supervision by the Project Arborist. 7. The Project Arborist shall document and instruct construction crews to cleanly cut all encountered roots. 8. Roots that are exposed shall be covered in wet burlap until the foundation is poured and the trench is backfilled.
Tree #s 40, 41, 43, 49, 50, 69 Construction of Lot 2 building foundation Removal of existing vegetation	9. Soil protection shall be installed along the south side of the building footprint to protect from heavy machinery (see Tree Protection Plan). Soil protection shall consist of three-quarter inch plywood on top of 5-inches of woodchip mulch. 10. Excavation for the building foundation within the dripline of trees shall be done using a flat-fronted bucket to avoid unnecessary ripping/tearing of roots. 11. Roots encountered that are greater than 2-inches diameter shall be documented and cleanly cut. 12. The stumps of tree #s 47, 51, 52, 54 shall be left in place and not ripped from the ground with heavy machinery.

TREE PROTECTION DETAIL



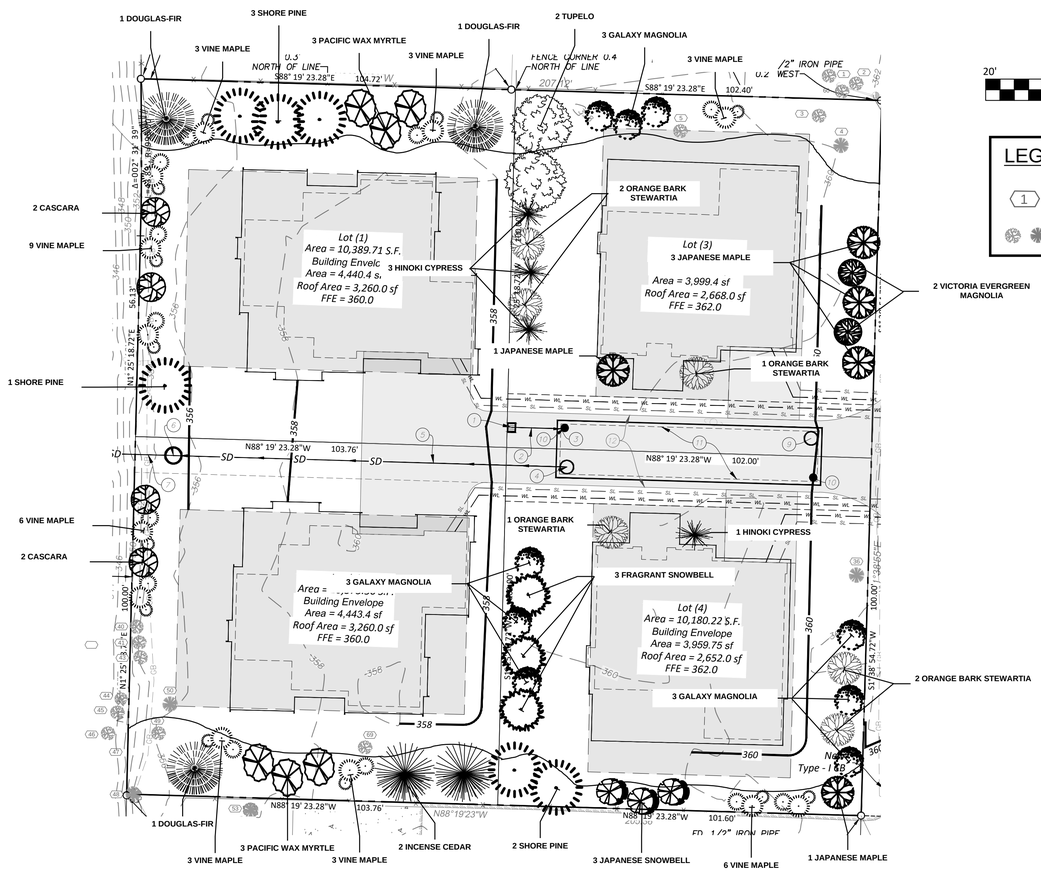
PROJECT 4833 MI_4 - LOT SHORT PLAT

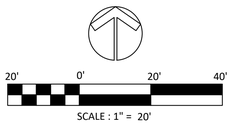
TREE RETENTION PLAN

CASCARA TREE CONSULTING
PN-8078A
QUALIFIED TREE RISK ASSESSOR
CERTIFIED ARBORIST ISA ®

PREPARED:
08/09/2023

SHEET NO.
TR-01





LEGEND:

1 = TREE IDENTIFIER

= EXISTING TREE

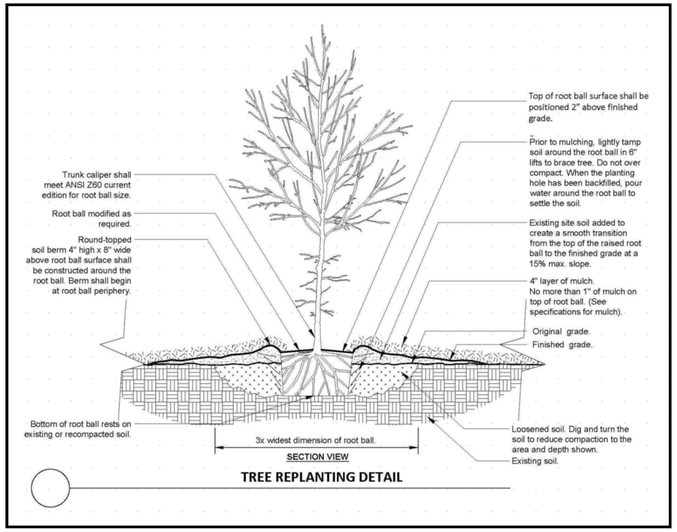
Tree Planting Schedule

Species	Scientific Name	Native	Qty	Size
Douglas-fir	*Pseudotsuga menziesii*	**Yes**	3	6' tall
Shore Pine	*Pinus contorta*	**Yes**	6	6' tall
Incense Cedar	*Calocedrus decurrens*	No	2	6' tall
Tupelo	*Nyssa sylvatica*	No	2	1.5" caliper
Cascara	*Frangula purshiana*	**Yes**	4	1.5" caliper
Victoria Evergreen Magnolia	*Magnolia grandiflora* **'Victoria'**	No	4	1.5" caliper
Pacific Wax Myrtle	*Myrica californica*	**Yes**	6	1.5" caliper
Vine Maple	*Acer circinatum*	**Yes**	33	1.5" caliper
Japanese Maple	*Acer palmatum*	No	5	1.5" caliper
Orange Bark Stewartia	*Stewartia monadelpha*	No	6	1.5" caliper
Hinoki Cypress	*Chamaecyparis obtusa*	No	4	6' tall
Galaxy Magnolia	*Magnolia 'Galaxy'*	No	9	1.5" caliper
Fragrant Snowbell	*Styrax obassia*	No	3	1.5" caliper
Japanese Snowbell	*Styrax japonicus*	No	3	1.5" caliper

Total Replacement Trees	
Native	52
Non-Native	38
Total Replacement Trees	90

TREE PLANTING SPECIFICATIONS

- Stage all trees before installation.
- Spacing on the plan is approximate. Trees shall be planted no closer than 10 feet apart. Large conifer trees shall be spaced 15 to 20 feet apart.
- Dig a hole at least 2 x the width of the root ball. The hole should be as deep as the root ball.
- Remove the tree from the container. If wrapped in burlap and wire, all materials should be removed prior to planting.
- Gently break up the root ball and cut away any wrapping/girdling roots.
- Place the root ball in the hole and fill the hole with loose soil.
- Ensure the root collar is not buried when filling the hole.
- Pack the soil down gently and water deeply.



TREE REPLANTING DETAIL

PROJECT 4833 MI_4 - LOT SHORT PLAT

TREE PLANTING PLAN

CASCARA TREE CONSULTING

PN-8078A
QUALIFIED TREE RISK ASSESSOR

CERTIFIED ARBORIST ISA ®

PREPARED:

08/09/2023

SHEET NO.

TR-02

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater: 4
List tree numbers: 4, 26, 28, 56

Number of trees 24" or greater (including 36" or greater): 13
List tree numbers: 4,10, 26, 27, 28, 32, 33, 34, 35, 50, 55, 56, 63

Number of trees from Exceptional Tree Table (MICC 19.16): 23
List tree numbers: 4, 5, 11, 12, 18, 26, 27, 28, 29, 33, 35, 40, 41, 43, 47, 54, 55, 56, 58, 59, 63, 64, 68

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site: 49 (A)
List tree numbers: 3-5,8-13,16,18-22, 24-41,43,47,49,50-52,54-56,58-59,63-64,66-68

Number of Large Regulated Trees on site proposed for removal: 33 (B)
List tree numbers: 8-13,16,18-22,24-35,37,39,55-56,58-59,64,66-67

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30%: 32.7 %

RIGHT OF WAY TREES

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way: 5
List tree numbers: 17,44,45,46,48

Number of Large Regulated Trees in right of way proposed for removal: 0

List tree numbers: None

Reason for removal: N/A

TREE REPLACEMENT

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"	1	0	0
10" up to 24"	2	16	32
Greater than 24" up to 36"	3	3	9
Greater than 36" and any Exceptional Tree	6	14	84
		TOTAL TREE REPLACEMENTS	125

CASCARA TREE CONSULTING
ARBORIST REPORT

TO:	Mr. Jintao (Addison) Cui
REFERENCE:	Tree Removal Assessment (Tree #s 6, 14, 23)
SITE ADDRESS:	4833 90th Ave SE, Mercer Island, WA
DATE:	7/17/2023
PREPARED BY:	Katie Hogan, ISA Certified Arborist PN-8078A ISA Tree Risk Assessment Qualified

I assessed three (3) trees at the above-addressed site that were previously removed to determine whether the trees met the City of Mercer Island's criteria for a hazard tree and to address comments received from the City dated June 5th, 2023. This memo addresses the following City comment:

> *Trees numbered 6, 14, and 23 were previously cut down without a permit. Please provide the reason for their removal. Please provide the diameter of the trees at 4.5 or a stump diameter. Appraisal for the value of trees 6, 14, and 23 is required even if the appraisal is retroactive with only the stump left.*

Observations & Discussion

I used historical photos available through Google Street View, photos available online from realtors, and observations of the remaining tree parts to evaluate the condition of the subject trees. I measured the diameter of each of the remaining stumps and measured the height of the cut stump.

Using Visual Tree Assessment (VTA) methods, I was able to determine that the three trees were all in declining condition at the time of their removal. See details in the table below for more information.

Table 1. Tree information and observations

Tree #	**Species**	**Stump Diameter** (in)	**Height of Stump Cut** (ft)	**Health Condition**	**Structural Condition**	**Notes**
6	Western redcedar (*Thuja plicata)*	27"	3'	Poor/Dead	Fair	Tree was over 70% dead; advanced trunk decay
14	Bigleaf maple (*Acer macrophyllum*)	12"	2'	Fair	Poor	Living snag; repeatedly topped; 100% ivy cover
23	Red alder (*Alnus rubra*)	19"	1.5'	Fair	Poor	Living snag; ivy cover

Appraisal Valuation

I conducted a tree appraisal using the Cost Approach and Trunk Formula Method outline in the Guide for Plant Appraisal, 10th Edition. This method is used to determine the value of mature and/or large trees that cannot be replaced in kind from nursery or field grown stock. The value of the tree using this methodology is based on the cost of the largest most commonly available tree stock, cost of installation, and the increase in value to account for the larger size of the subject tree being appraised. The value of the tree is then adjusted based on the observed condition of the tree as well as any limitations of the site where the tree was growing. The following formula is used to calculate the appraisal valuation:

Value = (Basic Tree Cost) X (Condition Rating %) X (Functional Limitations %) X (External Limitations %)

Table 2. Appraisal Calculations

Tree #	Species	Condition Rating	Functional Limitations	External Limitations	Basic Reproduction Cost	Depreciated Reproduction Cost	Total Appraisal Value (rounded)
6	*Thuja plicata*	14%	40%	50%	$32,636	$914	$910
14	*Acer macrophyllum*	30%	20%	20%	$8,143	$98	$100
23	*Alnus rubra*	30%	40%	40%	$20,414	$980	$980

Condition Ratings

Based on observations of the trunk, branches, roots, twigs, and foliage during the site inspection and review of imagery available online, average condition ratings were assigned to each tree. These ratings are based on the health, structure, and form of the tree which consider the following factors:

Health: *Considers crown indicators such as vigor, density, leaf size, quality, and stem shoot extensions.*

Structure: *Considers root condition and form, trunk condition, and branch assembly and arrangement.*

Form: *Considers the general shape and overall tree form.*

Table 3. Condition ratings for each tree

Tree #	Species	Average Condition Rating	Health Rating	Structure Rating	Form Rating	Factors Considered
6	*Thuja plicata*	14%	10%	20%	10%	Nearly dead; decayed
14	*Acer macrophyllum*	30%	30%	30%	30%	Declining/weak canopy; previously topped
23	*Alnus rubra*	30%	30%	30%	30%	Declining/weak canopy; previously topped

Functional & External Limitations

Based on observations of the site, location of the trees, and species characteristics functional and external limitation ratings were assigned. These ratings consider the following:

Functional Limitations: *Considers factors that may limit future growth, development, and overall health such as proximity to utility lines, susceptibility to pests or disease, or lack of soil and water availability.*

External Limitations: *Considers factors outside of the control of the tree owner that may affect long-term viability, structure, health, or tree form such as view easements, overhead utility pruning, prevalent disease/pests in the area, or climate change.*

Table 4. Functional and external limitation ratings for each tree

Tree #	Species	Functional Limitations	External Limitations	Factors Considered
6	*Thuja plicata*	40%	50%	Adjacent to new development; species intolerance to climate change & altered soil hydrology
14	*Acer macrophyllum*	30%	30%	Topped for utility clearance
23	*Alnus rubra*	30%	30%	Previously topped; species prone to decay/failure

PHOTOGRAPHS

Photo 1. Tree #6, cedar, nearly dead (Source: Zillow, accessed 7/13/2023).

Photo 2. Remaining stump from tree #6 showing substantial central decay and response growth around decay/wound.

Photo 3. Tree #23 shown from historical 2018 street view. Tree is a living snag that appears to have previously failed.

Photo 4. Remaining stump of Tree #23, alder.

Photo 5. Historical Google Street View imagery from October 2022 of Tree #14. Tree was in poor condition, nearly completely covered in ivy, and previously topped.

Photo 6. Historical Google Street View imagery from April 2022 of Tree #14. Tree was in poor condition, nearly completely covered in ivy, and previously topped.

Photo 7. Base of Tree #14. Eastern trunk failed and remaining western trunk over Island Crest Way was cut. Decay-causing fungi Kretzschmaria deusta was present.

Photo 8. Fallen tree parts from failed eastern trunk of Tree #14, note breaking point. Fallen trunk completely covered in ivy.

Attachments

1) Glossary
2) References
3) Inspection Methods
4) Appendix A – Assumptions & Limiting Conditions
5) Appendix B – Certification of Performance

GLOSSARY

ANSI A300: American National Standards Institute (ANSI) standards for tree care
Chlorotic: discoloration caused by lack of chlorophyll in the foliage
Codominant Stems: two or more stems (or leaders) of relatively similar size that emerge from the same location on the main trunk (Gilman, 2002)
Conifer: a tree that bears cones and has evergreen needles or scales
Crown: the above ground portion of the tree comprised of branches and their foliage
Crown raise pruning: a pruning technique where the lower branches are removed, thus raising the overall height of the crown from the ground
DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade
Deciduous: tree or other plant that loses its leaves annually and remains leafless generally during the cold season
Epicormic: arising from latent or adventitious buds
Evergreen: tree or plant that keeps its needles or leaves year-round; this means for more than one growing season
Increment: the amount of new wood fiber added to a tree in a given period, normally one year.
ISA: International Society of Arboriculture
Landscape function: the environmental, aesthetic, or architectural functions that a plant can have
Lateral: secondary or subordinate branch
Limits of disturbance: The boundary of minimum protection around a tree, the area that cannot be encroached upon without possible permanent damage to the tree. It is a distance determined by a qualified professional and is based on the age of the tree, its health, the tree species tolerance to disruption and the type of disturbance. It also considers soil and environmental condition and previous impacts. It is unique to each tree in its location.
Limited visual assessment: a visual assessment from a specified perspective such as foot, vehicle, or aerial (airborne) patrol of an individual tree or a population of trees near specified targets to identify specified conditions or obvious defects (ISA 2013)
Live crown ratio: the percentage of living tissue in the canopy versus the tree's height. It is a good indicator of overall tree health and the trees growing conditions. Trees with less than a 30% crown ratio often lack the necessary quantity of photosynthetic material to sustain the roots; consequently, the tree may exhibit low vigor and poor health
Monitoring: keeping a close watch; performing regular checks or inspections
Owner/manager: the person or entity responsible for tree management or the controlling authority that regulates tree management
Pathogen: causal agent of disease
Phototropic growth: growth toward light source or stimulant
ROW: right-of-way; generally referring to a tree that is located offsite on a city easement
Reaction wood: specialized secondary xylem which develops in response to a lean or similar mechanical stress, it serves to help restore the stem to a vertical position
Self-corrected lean: a tree whose trunk is at an angle to the grade but whose trunk and canopy changes to become upright/vertical
Significant tree: a tree measuring a specific diameter determined by the municipality the tree grows in. Some municipalities deem that only healthy trees can be significant, other municipalities consider both healthy and unhealthy trees of a determined diameter to be significant
Snag: a tree left partially standing for the primary purpose of providing habitat for wildlife
Soil structure: the size of particles and their arrangement; considers the soil, water, and air space

Sounding: process of striking a tree with a mallet or other appropriate tool and listening for tones that indicate dead bark, a thin layer of wood outside a cavity, or cracks in wood
Structural defects: flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure; may be genetic, or environmental
Tree credit: a number assigned to a tree by a municipality that may be equal to the diameter of the tree or a numerical count of the tree, or related to diameter by a factor conveyed in a table of the municipal code
Trunk area: the cross-sectional area of the trunk based upon measurement at 54 inches (4.5 ft.) above grade
Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, et al 1999) detailed visual inspection of a tree and surrounding site that may include the use of simple tools. It requires that a tree risk assessor walk completely around the tree trunk looking at the site, aboveground roots, trunk, and branches (ISA 2013)

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INSPECTION METHODS

I performed a Level 2 Visual Tree Assessment (VTA) for each tree. I visually inspected the tree from the ground, walking around the tree to inspect for any basal defects. I then positioned myself further from the tree, looking up into the crown and branches for any notable defects and symptoms of canopy decline.

Using the VTA method, I rated the health and structural condition of each tree. This inspection method is an international industry standard for assessing trees from the ground level and identifies external signs of decay, physical damage, growth related defects, and abnormal or declining foliage. Tree health and structure are each assigned their own condition rating. The following ratings are used:

Poor: Lacking a full crown, with more than 50% decline and dieback that especially affects larger branches. Low life expectancy for the species.

Fair: Crown decline and dieback up to 30% of the canopy. Below-average life expectancy for the species.

Good: Imperfect canopy density in 10% or less of the tree. Typical life expectancy for the species.

Excellent: Perfect specimen with excellent form and vigor, along with a well-balanced crown. Exceptional life expectancy for the species.

APPENDIX A - ASSUMPTIONS & LIMITING CONDITIONS

1) Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2) It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3) The assessment in this report is based on information and data from sources believed to be reliable, correct, and accurately reported. No responsibility is assumed for false or misleading information provided by others.
4) The consultant/appraiser shall not be required to give testimony or to attend court by reason of the report unless subsequent contractual arrangements are made including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5) Loss or alteration of any part of this report invalidates the entire report.
6) Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.
7) Neither all nor any part of the contents of the report, nor copy thereof, shall be conveyed by anyone, including the client to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser – particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or instate or to any initialed designation conferred upon the consultant/appraiser as stated in her qualification.
8) The report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of subsequent event, nor upon any finding to be reported.
9) Sketches, diagrams, graphs, and photographs in this report, being intended as visual aid, are not necessarily to scale and should not be construed as engineering or architectural reports or survey.
10) Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. There is not warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

APPENDIX B - CERTIFICATION OF PERFORMANCE

I, Katie Hogan, certify that:

- I have personally inspected the trees on the property referenced in this report and the statements of fact contained in this report are true and correct.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved.
- The reported analysis, opinions, and conclusions are my personal, unbiased professional analysis, opinions, and conclusions.
- My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural best practices.
- No individuals or organizations have provided significant assistance with the preparation of this report, except those named in the report.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined outcome or direction that favors the cause of the client, the results of the assessment, or the occurrence of any subsequent events.

Signed:

Cascara Tree Consulting, LLC

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists
& Environmental Specialists

February 18th, 2022 G-5514

Mr. Jesse Tam
Phone: (206) 948-9902
Email: jesset28@aol.com

Subject: **Geotechnical Engineering Investigation & Soil Infiltration Evaluation**
Proposed Short-Plat
4833 – 90th Ave SE
Mercer Island, Washington

Dear Mr. Tam:

At your request, GEO Group Northwest, Inc., conducted a geotechnical engineering investigation and soil infiltration evaluation for the proposed short-plat at the above-subject location in Mercer Island, Washington**.** The scope of our services included review of the area geologic map; assessment of subsurface soil and groundwater conditions; pilot infiltration testing; and preparation of this report of our findings, conclusions, and recommendations.

SITE CONDITIONS

Site Description

The project site is located in Mercer Island, Washington, as illustrated in *Plate 1 – Site Location Map*. The site is rectangularly shaped and consists of approximately 41,110 square feet (0.94 acres). The existing residence is located in the central region of the property. In general, the site features level topography, however, when nearing the west property line, the site begins to slope westerly at low to moderate inclinations down to Island Crest Way below. The majority of this moderately-inclined slope area is west of the property line in the City right-of-way. The existing site configuration and topography are illustrated in *Plate 2 – Site Plan,* and *Plate 3 – Site Geologic Hazards Map*. The site is bounded by residential developed properties to the north and

south, Island Crest Way to the west, and by 90th Avenue Southeast to the east. A gravel driveway extending from 90th Avenue Southeast enters the property along the east property line.

Proposed Development

At this time, we understand that the existing site is proposed to be divided into four individual lots. In this case, we anticipate that a total of up to four single-family residences will be built on the project site. This report has been prepared to be applicable to construction of typical wood-frame single-family residences having 1 to 3 stories including a basement. We recommend that specific plans for the parcels should be reviewed by the geotechnical engineer, to evaluate whether the conclusions and recommendations in the report remain applicable and supplemental or revised recommendations should be provided where appropriate.

SITE INVESTIGATION

Geologic Overview

According to the area geologic map, the site soils are identified as Vashon subglacial till (Qvt) from the Fraser Glaciation. Glacial till is described as a very compact mixture of sand, silt, clay, and gravel deposited under glacial ice during the Fraser glaciation period. Glacial till typically has a weathered zone of loose to medium dense soil on top, underlain by dense, unweathered till.

Subsurface Investigation

On January 21st, 2022, Garrett Dean, Staff Engineering Geologist from our firm, visited the site to perform a visual reconnaissance of the site and investigate the subsurface soil conditions. In addition to our reconnaissance, we oversaw the excavation of five exploratory test pits throughout the site (TP-1 through TP-5). The boring locations are illustrated on *Plate 2 – Site Plan*.

The soils encountered the test pits typically consisted of a thin surface veneer of organic-rich silty sand topsoil, underlain by medium dense to very dense silty sand with some gravel to the total depth of the test pits which ranged between approximately 3 to 3.5 feet below the ground surface (bgs). A minor amount of fill material was encountered near the surface in test pit TP-1. A small amount of groundwater seepage was encountered at a depth of approximately 2.5 feet in

test pit TP-1. For additional information about the soils encountered, please refer to the test pit logs attached as *Appendix A* to this report.

GEOLOGIC HAZARD AREAS REVIEW

We reviewed available geologic hazard areas information on the City of Mercer Island Information and Geographic Services (IGS) website. The information indicates that the project site is located within erosion and landslide hazard critical areas. According to the IGS information, no known landslides are identified on the project site or immediate adjacent vicinity. The erosion and landslide hazard areas at the site are limited to the moderately-inclined, sloping region at the west margin of the site and are identified in *Plate 3 – Site Geologic Hazards Map*.

Landslide Hazard Area Evaluation

During our investigation, we observed no indications of soil instability or erosion within the hazard area or other areas of the site. No water seepage was observed in test pits TP-3 and TP-4, which were located within or directly adjacent to the mapped landslide hazard area. The slope in the hazard area is approximately 12 to 16 feet in vertical height and per the mapping provided by the City of Mercer Island IGS, is less than 40 percent grade, which excludes the feature's designation as a 'steep slope' status. The slope and hazard area are well-vegetated with native shrubs, trees, and groundcover. No water seepage was observed at the slope's toe or face.

We find the presence of very dense, glacially consolidated soils at shallow depths throughout the project site to be a mitigating factor in regards to the potential for landsliding at the site. Therefore, in our opinion, the risk of landsliding or soil movement at the site can be considered very low based on these observed site conditions.

Erosion Hazard Area Evaluation

During our investigation we did not observe signs of rutting or downslope soil movement at the site or erosion hazard area. We observed the site as a whole, including the moderately-inclined slope region at the west extent of the site, to be well-vegetated with various native shrubs, trees, and groundcover. This vegetated condition is a mitigating factor with regards to soil erosion at the site in our opinion.

Provided that the proper temporary and permanent erosion and sediment controls, provided in this report, are implemented where soils have been disturbed during and post development, it is our opinion that the risk of significant soil erosion at the site can be considered minimal.

SOIL INFILTRATION EVALUATION

Soil Infiltration Testing

Test pit TP-5 was used to perform soil infiltration testing using the small Pilot Infiltration Test procedure described in the December 2014 edition of the Washington Department of Ecology Stormwater Management Manual for Western Washington. The test was performed at a depth of approximately 26 inches below the existing ground surface at the location.

Following the soaking period, the testing consisted of taking water level measurements until one hour of essentially steady water levels were measured. Afterward, the water supply was shut off, and the drop of the water level was measured at regular intervals for a period of 90 minutes. The test data is presented in *Appendix B* to this letter.

Approximately 1.5 inches of water was observed in the test pit at 8:50am the following morning, which was approximately 17 hours after the testing was completed. The test pit was excavated further to check for the presence of a hydraulic restrictive layer. A hydraulically restrictive layer was encountered at approximately 3 feet of depth in TP-5. Based on observations of soil conditions in the other four test pits that were excavated on site (TP-1 through TP-4), the presence of the hydraulically restrictive layer can be assumed to underly the entirety of project site.

Testing Results

At test pit TP-5, a measured infiltration rate of 3.21 in/hr was obtained for the steady flow portion of the testing, and a measured infiltration rate of 0.61 in/hr was obtained for the falling head portion of the testing.

We used the falling head values to calculate design infiltration rates for the test location. We applied a correction factor of 0.28 to account for soil variability, test method used, and long-term maintenance considerations. The resulting design infiltration rate is calculated to be **0.17 in/hr**.

Infiltration Feasibility

In our opinion, infiltration feasibility at the subject location is limited first by the high fines content in the weathered soil horizon and is additionally hindered by the presence of hydraulically restrictive hardpan glacial till which was encountered at relatively shallow depths in the test pits. As mentioned previously in the Subsurface Investigation and Soil Infiltration Testing sections above, hydraulically restrictive glacial till was encountered at depths ranging between 3 to 3.5 feet below the ground surface in the test pits.

CONCLUSIONS AND RECOMMENDATIONS

Soil Infiltration Feasibility Evaluation

The results from our subsurface investigation conclude that the site soils contain a high fraction of fines and are relatively impermeable. In our opinion, infiltration as a stormwater bmp for the site is not feasible. Dispersion in the backyards is not recommended due to potential impacts to the neighboring properties. We recommend that drainage from the proposed development be discharged into the existing stormwater drainage system if available, or otherwise discharged to an approved alternative.

Seismicity Evaluation

In accordance with the 2018 International Building Code, the site classification is Site Class D (stiff soil). Glacially consolidated soils have a high shear strength and the potential for landslides, liquefaction and/or lateral spreading during a strong motion earthquake can be considered negligible. In our opinion, the site is stable and the risk of a surface rupture, resulting from a large magnitude seismic event, is very low. No seismic mitigation measures are recommended, with the exception of the addition of design criteria for seismically induced soil loads on permanent below-grade basement and retaining walls.

Foundations

Soils that are anticipated to be acceptable for building support were encountered at a depth of approximately 2.5 to 3.5 feet bgs throughout the project site. Based upon this information, it is our opinion that new foundations for the project can consist of conventional concrete strip and column footings that bear directly on dense native soils or on compacted structural fill that has

been placed on a subgrade of dense native soils. Our recommended design criteria for conventional footing foundations supported on native soils or structural fill are provided below.

- Allowable bearing pressure, including all dead and live loads:
  Undisturbed, medium dense or dense soil = 2,500 psf
  Structural fill placed on medium dense or dense soil = 2,500 psf

- Minimum depth to base of perimeter footing below adjacent exterior grade = 18 inches

- Minimum depth to bottom of interior footings below top of floor slab = 12 inches

- Minimum width of wall footings = 16 inches

- Minimum lateral dimension of column footings = 24 inches

- Estimated post-construction settlement = ½ inch

- Estimated post-construction differential settlement across building width = ½ inch

A one-third increase in the above allowable bearing pressures can be used when considering short-term transitory wind or seismic loads.

Lateral loads against the building foundations can be resisted by friction between the foundation and the supporting subgrade or by passive earth pressure acting on the buried portions of the foundations. For the latter case, the foundations must be poured "neat" against the existing undisturbed soil or be backfilled with compacted structural fill. Our recommended parameters are as follows:

- Passive Pressure (Lateral Resistance)
  350 pcf, equivalent fluid weight, for structural fill or competent undisturbed native soil

- Coefficient of Friction (Friction Factor)
  0.35 for structural fill or competent undisturbed native soil

Conventional Retaining and Basement Walls

Conventional concrete retaining or basement walls may be supported on spread footing foundations which are supported per the recommendations provided above in this report. Walls that are restrained horizontally are considered unyielding and should be designed for lateral soil pressure under the at-rest condition. Walls that are free to rotate should be designed for an active lateral soil pressure.

- At-Rest Soil Pressure

  Walls supported horizontally (i.e., floor framing) are considered unyielding and should be designed under the at-rest condition. We recommend using a design lateral soil pressure with an equivalent fluid density of 45 pcf for level ground above the wall.

- Active Soil Pressure

  Cantilever walls designed to yield an amount equal to 0.002 times the wall height should be designed under an active soil pressure condition. We recommend using a design lateral soil pressure with an equivalent fluid density of 35 pcf for level ground above the wall.

- Seismic Earth Pressure

  In addition to the above triangular lateral soil pressures, a rectangular pressure of 8H should be added for permanent below grade walls to account for seismically induced dynamic soil loads. Where H is the overall height of the wall in feet.

- Passive Earth Pressure and Base Friction

  The available passive earth pressure that can be mobilized to resist lateral forces may be assumed to be equal to 350 pcf equivalent fluid weight for both undisturbed soils and engineered structural fill. The base friction that can be generated between concrete and undisturbed bearing soils or engineered structural fill may be based on an assumed 0.35. The soil design parameters are allowable values and include a safety factor of 2.

The active and at-rest design pressures are based on a fully drained wall condition and do not include the effects of surcharges. For sloped ground above walls, a surcharge equivalent to

50 percent of the soil height above the wall (soil unit weight 125 pcf) should be used in addition to the above soil pressure. Traffic and construction equipment surcharge may be considered as a uniform surcharge equivalent to two (2) feet of soil acting over the full depth of the active pressure. Below grade walls should be drained to prevent the buildup of hydrostatic pressure behind the wall, as discussed in the Drainage section of this report. Restrained walls designed should be backfilled after completing their lateral restraint is in place or per the approval of the structural design engineer.

Concrete Slabs-on-Grade

Slab-on-grade floors should be constructed on a firm, unyielding subgrade. During preparation of the slab subgrade, any areas of the subgrade that have been disturbed by construction activity should be either re-compacted or excavated and replaced with compacted structural fill. We recommend that structural fill placed below slab-on-grade floors conform to the earthwork and grading recommendations provided in this report.

To avoid moisture build-up on the subgrade, the floor slab should be placed on a capillary break, which is in turn placed on the prepared subgrade. The capillary break should consist of a 6"-minimum thickness layer of crushed rock or gravel that contains no more than five percent material finer than a No. 4 sieve. A vapor barrier, such as a 10-mil plastic membrane, should be placed over the capillary break and taped or sealed to minimize water vapor transmission upward through the slab, if post-construction vapor transmission is undesirable.

Drainage

Water should not be allowed to stand in areas where footings, slabs, or pavements are to be constructed. Final site grades should provide drainage away from the building structure. Drainage should be installed against below-grade walls to prevent moisture intrusion and a buildup of hydrostatic pressure. To facilitate drainage behind below grade walls, we recommend installing a vertical drain mat (sheet drain) such as Miradrain 6000, or equivalent, with a footing drain at the base of the wall, as illustrated in *Plate 4 – Typical Basement Wall Drainage*. Wall backfill against the vertical drain mat should be compacted to a minimum of 90 percent of the material's maximum dry density to mitigate clogging of the filter fabric.

Footing drains, consisting of a 4-inch minimum diameter, rigid perforated drain pipe, should extend around new perimeter foundations and be installed behind new basement and retaining walls. Footing drains should be bedded in washed drain rock and the rock wrapped with

geotextile filter fabric, such as Mirafi 140N, or equivalent, as illustrated *Plate 5 – Typical Footing Drain*. The drain rock should extend above the base of the vertical drain mat. Roof and other drain lines should not be connected to the footing drain system. We recommend installing a sump pump system if the footing drain system cannot drain by gravity to a discharge location. Installation of clean-outs are recommended to allow periodic maintenance of the drain system.

Grading and Earthwork

Erosion Control

Temporary erosion and sedimentation controls (TESCs), such as silt fences, should be installed down-gradient of the areas to be disturbed to prevent sediment-laden runoff from being discharged off site. Surface runoff should not be allowed to flow over the top of slopes into excavations. During wet weather, exposed soils should be covered with plastic sheeting or straw mulch. Stockpiled soils should be covered with plastic tarps. For permanent erosion control disturbed soils should be landscaped and mulched upon completion of the site work.

A construction entrance consisting of 2- to 4-inch size crushed rock should be installed to prevent tracking onto the street. The construction entrance area should be cleared and grubbed prior to rock placement and we recommend underlaying the rock with a woven geotextile such as Mirafi 500X, or equivalent, to provide separation between the rock and subgrade soil.

Excavations and Slopes

Temporary excavation slopes should not be greater than the limits specified in local, state and federal government safety regulations. We recommend that temporary cuts greater than 4 feet in height be sloped at inclinations up to 1H:1V (Horizontal: Vertical) in loose to medium dense soils. Temporary excavations in the very dense, hardpan soils can be sloped near vertical under the observation of the geotechnical engineer. Permanent cut and fill slopes should be inclined no steeper than 2.5H:1V. Steeper permanent fill slopes can be achieved with the use of geogrid for lateral reinforcement. Slopes that are to be maintained or mowed should be sloped at 3H:1V, or less. Excavation work for the project should not extend below a 1H:1V line extending from the property lines in loose to medium dense soils, in order to avoid affecting the adjacent properties.

Fill slopes should consist of granular material compacted to a minimum of 90 percent of the material's maximum dry density. If supporting structural elements, the fill should be compacted to the structural fill specification of 92 percent.

Based on the subsurface findings, groundwater seepage is expected. If significant water seepage or other adverse conditions are encountered, excavation should be halted, and the geotechnical engineer should be contacted to review the site conditions.

Structural Fill

Structural fill is defined as fill soil supporting building foundations, floor slabs, pavements, sidewalks or other structures. Structural fill should be free of organic and other deleterious substances and have a maximum fragment size of 3 inches. The site soils contain appreciable proportions of fines may be difficult to achieve compaction during wet weather, depending on the material's moisture content. Therefore, during wet weather, we recommend using a free-draining granular material containing no more than 5 percent fines content (silt and clay-size particles passing the No. 200 mesh sieve). Other materials, such as recycled crushed concrete or crushed rock may be used.

Structural fill should be placed and compacted at or near the material's optimum moisture content and in lifts that are 10 inches thick or less. Below slab-on-grade floors, foundations, and other structural elements, structural fill should be compacted to a minimum of 92 percent of the material's maximum dry density, as determined by ASTM Test Designation D-1557 (Modified Proctor). For driveways, structural fill should be compacted to 90 percent, with the exception of the top 12 inches which should be compacted to 95 percent. Fill behind retaining walls and next to building foundation walls should be compacted to a minimum of 90 percent (92 percent if supporting structural elements; if supporting pavements, the top 12 inches should be compacted to 95 percent).

Utility trench backfill within the City right-of-way should be compacted to the specifications required by the City, sewer or water district. Observation and compaction testing may be required at the time of fill placement to document and verify that the compaction specifications are achieved.

LIMITATIONS

The findings and recommendations stated herein are based on field observations, our experience on similar projects and our professional judgment. The recommendations presented herein are our professional opinions derived in a manner consistent with the level of care and skill ordinarily exercised by other members of the profession currently practicing under similar conditions in this area and within the project schedule and budget constraints. No warranty is expressed or implied. In the event that site conditions are found to differ from those described in this report, we should be notified so that the relevant recommendations in this report can be reevaluated and modified if appropriate.

CLOSING

We appreciate the opportunity to provide you with geotechnical engineering services for this project. Please do not hesitate to contact us if you have any questions regarding this report.

Sincerely,

GEO Group Northwest, Inc.

Garrett Dean, G.I.T.
Staff Engineering Geologist

William Chang, P.E.
Principal Engineer

Attachments:

Plate 1 – Site Location Map
Plate 2 – Site Plan
Plate 3 – Site Geologic Hazards Map
Plate 4 – Typical Basement Wall Drain
Plate 5 – Typical Footing Drain
Appendix A – USCS Soil Classification & Test Pit Logs
Appendix B - Pilot Infiltration Test Data & Calculations

Source: King County iMap, 2022

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

SITE LOCATION MAP

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	2/18/2022	GD	WC	G-5514	1

LEGEND

TP-1 — **Test Pit Number & Approximate Location**

0 30' 60'

Approx. Scale: 1 inch = 60'

N

This Site Plan Adapted From City of Mercer Island GIS Portal, Retrieved February, 2022.

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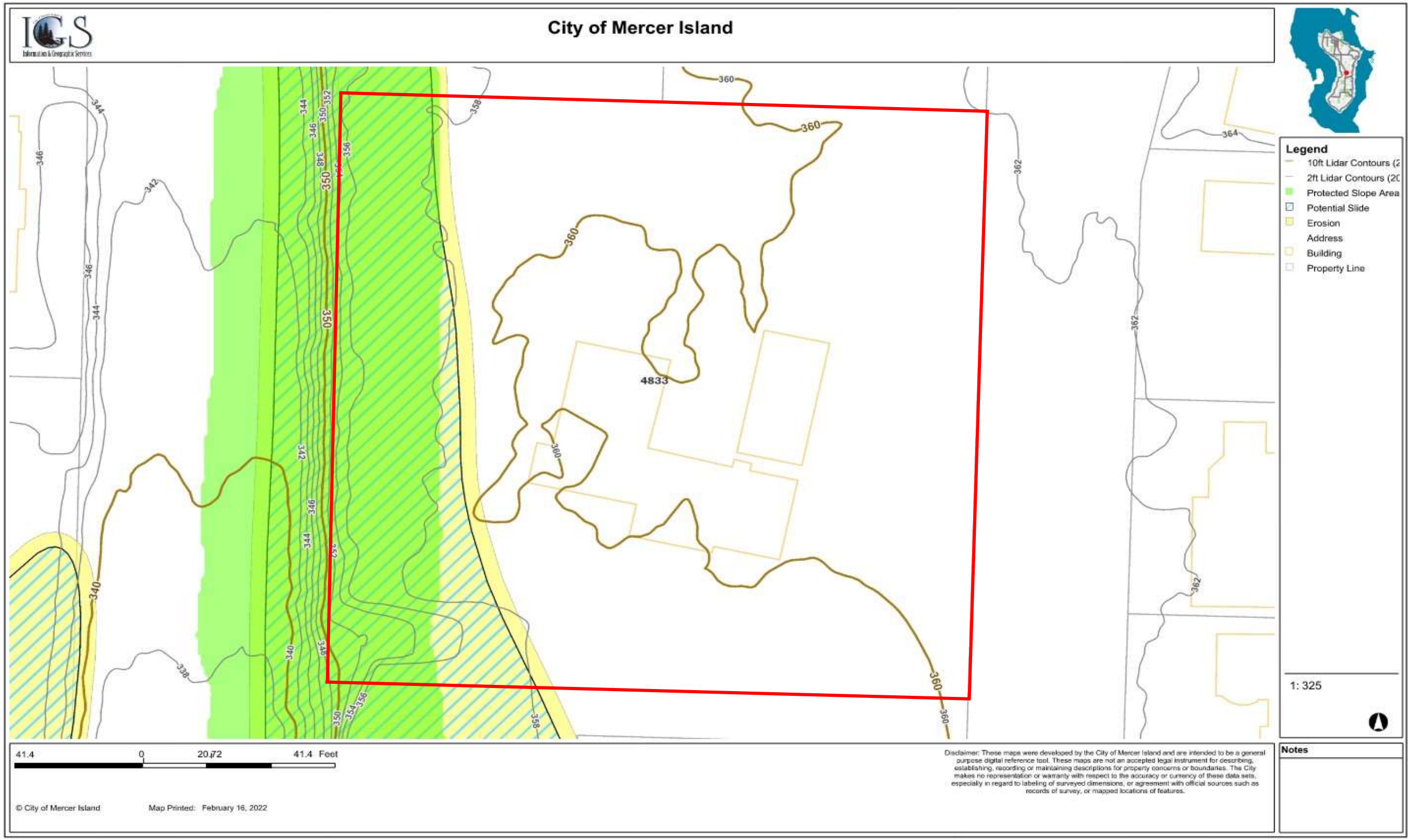
SITE PLAN

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
As Shown	2/18/22	GD	WC	G-5514	2



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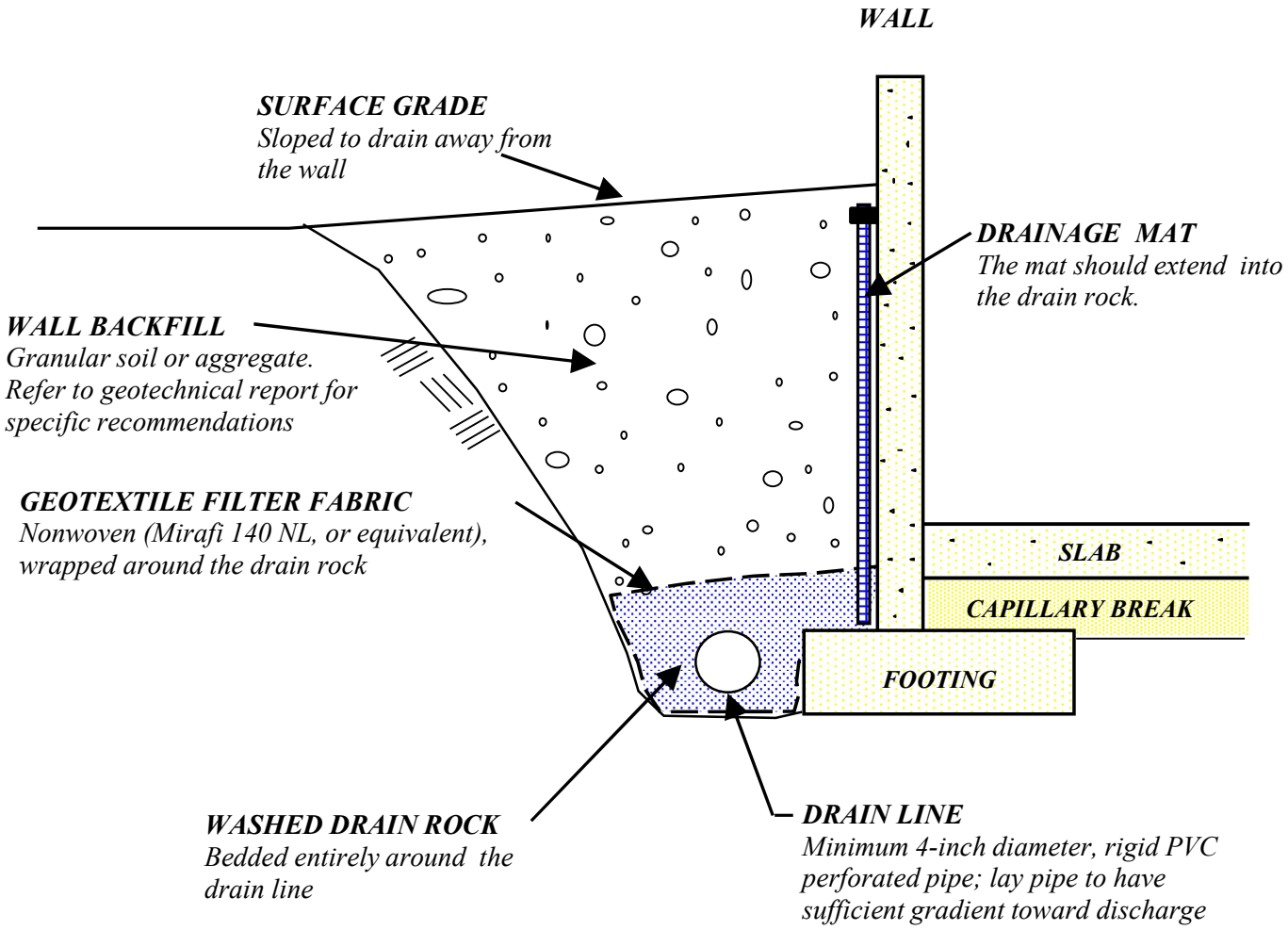
SITE GEOLOGIC HAZARDS MAP

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	AS SHOWN	DRAWN BY	GD	CHECKED BY	WC	DATE	2/18/2022	PROJECT NO.	G-5514	PLATE	3

TYPICAL BASEMENT WALL DRAIN



NOT TO SCALE

NOTES:

1.) Do not replace rigid PVC pipe with flexible corrugated plastic pipe.

2.) Perforated PVC pipe should be tight jointed and laid with perforations oriented downward. The pipe should be gently sloped to provide flow toward the tightline or discharge location.

3.) Do not connect other drain lines into the footing drain system.

4.) Backfill should meet structural fill specifications if it will support driveways, sidewalks, patios, or other structures. Refer to the geotechnical engineering report for structural fill recommendations.

5.) Surface grade above the backfill can be covered with a layer of relatively impermeable topsoil or pavement or slab to reduce infiltration of surface water into the backfill and drainage system

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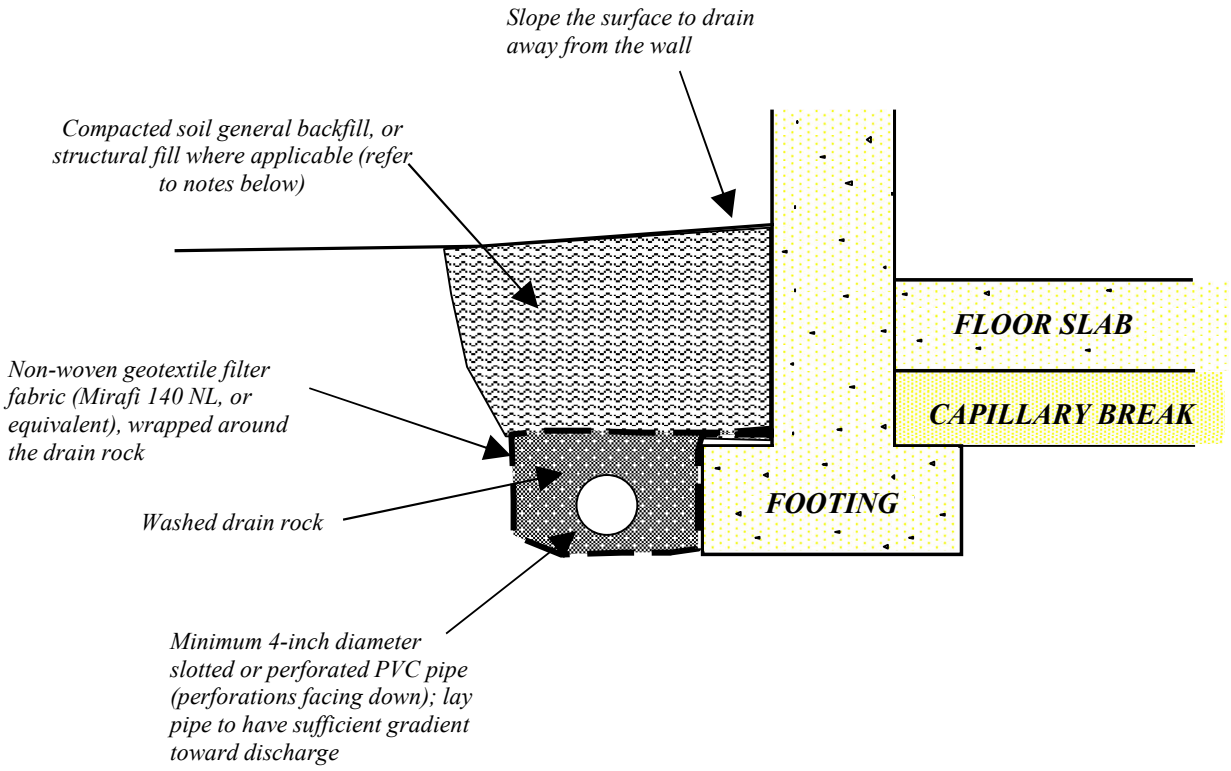
TYPICAL BASEMENT WALL DRAIN
PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	2/18/2022	GD	WC	G-5514	4

TYPICAL FOOTING DRAIN



NOT TO SCALE

NOTES:

1.) Perforated or slotted rigid PVC pipe should be tight jointed and laid with perforations or slots down, and with positive gradient toward discharge location(s). The pipe should be placed at or slightly above the elevation of the bottom of the footing. Do not replace rigid PVC pipe with flexible corrugated plastic pipe.

2.) Do not connect other drainage lines to the footing drain lines. Drain line cleanouts should be installed at appropriate locations to allow inspection and maintenance of the lines after construction.

3.) If the backfill will support sidewalks, driveways, patios, or other structures, it should be compacted to at least 90% of its maximum dry density based on the Modified Proctor test method, except that the top 12 inches of the backfill should be compacted to at least 95% of the maximum dry density.

4.) The geotextile filter fabric should be placed around the drain rock as shown, and not wrapped directly around the pipe.

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TYPICAL FOOTING DRAIN
PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE: NONE	DATE: 2/18/2022	MADE: GD	CHKD: WC	JOB NO. G-5514	PLATE 5

APPENDIX A

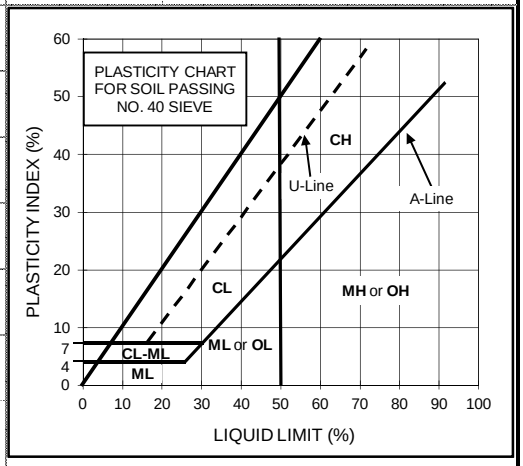
G-5514

USCS SOIL CLASSIFICATION & TEST PIT LOGS

SOIL CLASSIFICATION & PENETRATION TEST DATA EXPLANATION

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS (More Than Half by Weight Larger Than No. 200 Sieve)	GRAVELS (More Than Half Coarse Fraction is Larger Than No. 4 Sieve)	CLEAN GRAVELS (little or no fines)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 4 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			GP	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES LITTLE OR NO FINES		CLEAN GRAVELS NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (with some fines)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	GM: ATTERBERG LIMITS BELOW "A" LINE. or P.I. LESS THAN 4
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		GC: ATTERBERG LIMITS ABOVE "A" LINE. or P.I. MORE THAN 7
	SANDS (More Than Half Coarse Fraction is Smaller Than No. 4 Sieve)	CLEAN SANDS (little or no fines)	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 6 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES		CLEAN SANDS NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (with some fines)	SM	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE with P.I. LESS THAN 4
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE with P.I. MORE THAN 7
FINE-GRAINED SOILS (Less Than Half by Weight Larger Than No. 200 Sieve)	SILTS (Below A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	ML	INORGANIC SILTS, ROCK FLOUR, SANDY SILTS OF SLIGHT PLASTICITY		
		Liquid Limit > 50%	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOIL		
	CLAYS (Above A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	CL	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, CLEAN CLAYS		
		Liquid Limit > 50%	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS		
	ORGANIC SILTS & CLAYS (Below A-Line on Plasticity Chart)	Liquid Limit < 50%	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
		Liquid Limit > 50%	OH	ORGANIC CLAYS OF HIGH PLASTICITY		
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS		



SOIL PARTICLE SIZE

FRACTION	U.S. STANDARD SIEVE			
	Passing		Retained	
	Sieve	Size (mm)	Sieve	Size (mm)
SILT / CLAY	#200	0.075		
SAND				
FINE	#40	0.425	#200	0.075
MEDIUM	#10	2.00	#40	0.425
COARSE	#4	4.75	#10	2.00
GRAVEL				
FINE	0.75"	19	#4	4.75
COARSE	3"	76	0.75"	19
COBBLES	76 mm to 203 mm			
BOULDERS	> 203 mm			
ROCK FRAGMENTS	> 76 mm			
ROCK	>0.76 cubic meter in volume			

GENERAL GUIDANCE FOR ENGINEERING PROPERTIES OF SOILS, BASED ON STANDARD PENETRATION TEST (SPT) DATA

SANDY SOILS				SILTY & CLAYEY SOILS		
Blow Counts N	Relative Density, %	Friction Angle ϕ, degrees	Description	Blow Counts N	Unconfined Strength q_u, tsf	Description
0 - 4	0 -15		Very Loose	< 2	< 0.25	Very soft
4 - 10	15 - 35	26 - 30	Loose	2 - 4	0.25 - 0.50	Soft
10 - 30	35 - 65	28 - 35	Medium Dense	4 - 8	0.50 - 1.00	Medium Stiff
30 - 50	65 - 85	35 - 42	Dense	8 - 15	1.00 - 2.00	Stiff
> 50	85 - 100	38 - 46	Very Dense	15 - 30	2.00 - 4.00	Very Stiff
				> 30	> 4.00	Hard

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TEST-PIT: TP-1

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, glass bottle, wood fragments (**topsoil/fill**)	S1	34.0	-Probe 30" at 0'
2	SM	Silty SAND, brown to brownish-gray, dense, damp; with some subrounded gravel, minor cobbles (**weathered till**)	S2	14.7	-Probe 4" at 1.5' -Probe 3.5" at 2.5'
3	SM	Silty SAND, brownish-gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S3	18.5	-Probe 0.5" at 3'
4		Total depth = 3.1 feet Minor groundwater seepage encountered at approximately 2.5 feet.			
5					
6					
7					

TEST PIT: TP-2

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)	S1	16.2	-Probe 18" at 0' -Probe 18" at 1'
2	SM	Silty SAND, brown to gray, loose to medium dense, damp; with some subrounded gravel, minor cobbles, minor mottling, roots (**weathered till**) -becomes gray at 1.5'	S2	16.1	-Probe 3" at 2'
3	SM	Silty SAND to Sandy SILT, gray, very dense, damp; with some subrounded gravel, mottling (**glacial till**)	S3	17.8	-Probe 5" at 3' -Probe 0.5" at 3.5'
4		Total depth = 3.5 feet No groundwater encountered.			
5					
6					
7					

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TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A2

TEST-PIT: TP-3

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 358 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)			-Probe 30" at 0'
					-Probe 6" at 1'
2	SM	Silty SAND, brown to brownish-gray, dense, damp; with some subrounded gravel and cobbles (**weathered till**)	S1	20.7	-Probe 4" at 2'
3	SM	Silty SAND, gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S2	17.1	-Probe 0.5" at 2.8'
4		Total depth = 3.0 feet No groundwater encountered			
5					
6					
7					

TEST PIT: TP-4

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 358 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose to medium dense, moist; with some subrounded gravel, organics, small roots (**topsoil**)			-Probe 20" at 0.5'
2	SM	Silty SAND, brownish-gray, medium dense, damp; with some subrounded gravel, minor cobbles, minor mottling (**weathered till**)	S1	13.2	-Probe 10" at 1.7'
3	SM	Silty SAND to Sandy SILT, gray, very dense, damp; with some subrounded gravel, mottling (**glacial till**)	S2	15.8	-Probe 4.5" at 3' -Probe 0" at 3.3'
4		Total depth = 3.3 feet No groundwater encountered.			
5					
6					
7					

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A3

TEST-PIT: TP-5

LOGGED BY GD LOG DATE: 1/21/2022 GROUND ELEV. 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)			-Probe 25" at 0'
			S1	28.7	
2	SM	Silty SAND, brown, dense, damp; with some subrounded gravel (**weathered till**)	S2	38.2	-Probe 0" at 2.1'
3	SM	Silty SAND, gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S3	25.3	-Probe 1" at 3'
4		Total depth = 3.0 feet No groundwater encountered. Pilot infiltration test performed at depth of approximately 26 inches.			
5					
6					
7					

TEST PIT:

LOGGED BY LOG DATE: GROUND ELEV.

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1					
2					
3					
4					
5					
6					
7					

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A4

APPENDIX B

G-5514

PILOT INFILTRATION TEST DATA & CALCULATIONS

Pilot Infiltration Test Data

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Time	Time Interval (minutes)	Water Level (inches)	Water Level Change (inches)	Flow Reading (sec/gal)	Comments/Remarks
7:30	- -	- -	- -	17.14	Start adding water. Flow approximately 3.50 gpm
8:12	42	12	12	75.00	Flow reduced to approximately 0.8 gpm
9:12	60	12	0	75.00	
10:12	60	12	0	75.00	
11:12	60	12	0	75.00	
12:12	60	12	0	75.00	
13:12	60	12	0	200.00	Flow reduced to approximately 0.3 gpm
14:12	60	12	0	200.00	

Time	Time Interval (minutes)	Water Level (inches)	Water Level Change (inches)	Comments/Remarks
15:12	- -	12 1/4	0	
15:22	10	12	- 1/4	
15:32	10	11 3/4	- 1/4	
15:42	10	11 1/4	- 1/2	
15:52	10	11	- 1/4	
16:02	10	10 5/8	- 3/8	
16:12	10	10 1/4	- 3/8	
16:22	10	10	- 1/4	
16:32	10	9 3/4	- 1/4	
16:42	10	9 1/2	- 1/4	
8:50	928	1 1/2	-8	End of readings and testing.

Test performed on January 20th, 2022.
Water level data is vertical height of water in pit.

Pilot Infiltration Test Calculations

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Steady-State Calculation:

Pit Dimensions: 4 ft x 3 ft = 12 sqft

Average Steady Flow Rate: 0.40 gpm

0.40 gpm x (60 min/hr) = 24 gph

24 gph x (1 cuft / 7.48 gal) = 3.21 cuft/hr

3.21 cuft/hr / 12 sqft = 0.2675 ft/hr = 3.21 in/hr **Field Rate = 3.21 in/hr**

Correction Factor: 0.28

Design infiltration rate: 3.21 in/hr x (0.28)

= 0.90 in/hr

Design Rate = 0.90 in/hr

Test performed on January 20th, 2022.

Pilot Infiltration Test Calculations

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Falling Head Calculation:

Time interval: 15:12 to 08:50 (1058 minutes)

Total change in water level: 12.25 in - 1.5 in = 10.75 in

Overall infiltration rate: 10.75 in / 17.63 hrs = 0.61 in/hr

Field Rate = 0.61 in/hr

Correction Factor: 0.28

Design infiltration rate: 0.61 in/hr x (0.28)

= 0.17 in/hr

Design Rate = 0.17 in/hr

Test performed on January 20th, 2022.

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists
& Environmental Specialists

September 16th, 2022 G-5514

Mr. Jesse Tam
Phone: (206) 948-9902
Email: jesset28@aol.com

Subject: **Addendum to -**
Geotechnical Engineering Investigation & Soil Infiltration Evaluation
Proposed Short-Plat
4833 – 90th Ave SE
Mercer Island, Washington

Reference: **"Geotechnical Engineering Investigation & Soil Infiltration Evaluation, Proposed Short-Plat, 4833 – 90th Ave SE, Mercer Island, Washington," GEO Group Northwest, Inc., G-5514, February 18th, 2022.**

Dear Mr. Tam:

We reviewed the Preliminary Grading and Utilities Plan for the project. The plan was prepared by Pacific Land Engineering, LLC and is attached to this letter. Based on our review, we understand that a stormwater detention vault is proposed in the central-east portion of the property. The stormwater vault as proposed will discharge westerly to the City stormwater utility along the Island Crest Way east right-of-way. Construction of the stormwater facility will require excavations within the steep slope area at the west side of the site and adjacent City right-of-way. Our geotechnical recommendations regarding the construction of the proposed stormwater facility are provided in the following sections to this report.

Excavation Recommendations

Stormwater Vault

Based on the proposed configuration we estimate that excavations necessary for the vault construction will reach depths of up to approximately 15 feet below grade. Temporary excavations into the very dense, glacial till soils for construction of the stormwater vault and

storm drain to the utility can be completed at near vertical inclinations as recommended in our geotechnical report. Approximately 1 to 2 feet of weathered soils at the surface may need to be sloped at 1H:1V, if present. During the installation of the stormwater vault, the excavation walls should be draped with plastic sheeting to protect workers from loose gravel, if present.

Stormwater Drain to Utility

Excavation into the steep slope region at the west property line and adjacent right-of-way will be required to complete the stormwater tie-in to the City utility. Based on the results of our geotechnical investigation, the slope is underlain with cemented glacial till soils. In our opinion, excavation trenching into the slope for the stormwater tie-in can be completed at near vertical inclinations without destabilizing the slope. For worker protection, the excavated trenches should be shored with trench boxing or equivalent.

Sincerely,

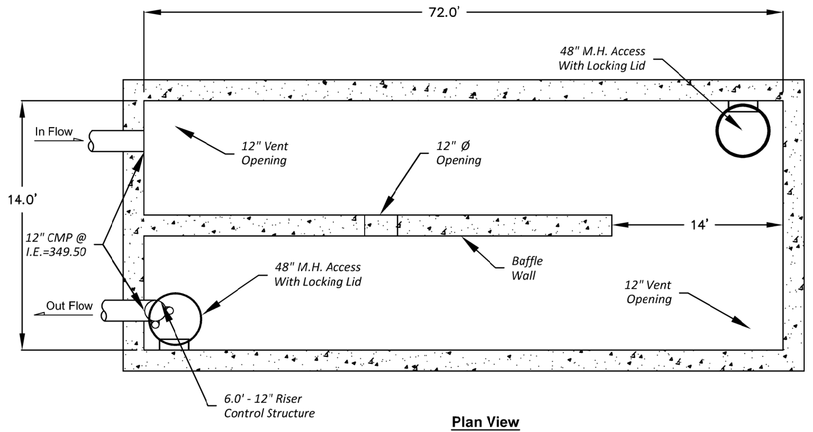
GEO GROUP NORTHWEST, INC.

Garrett Dean, G.I.T.
Staff Engineering Geologist

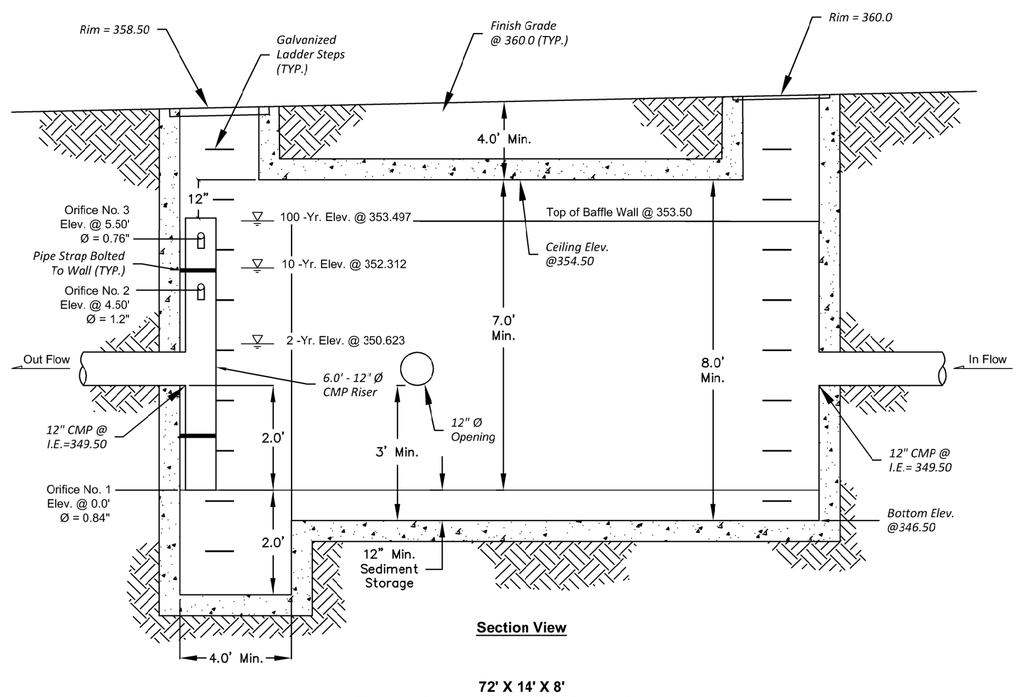
William Chang, P.E.
Principal Engineer

Attachment:

"Preliminary Grading and Utilities Plan," Project 4833 MI_4 – Lot Short Plat, Sheet No. C-6.0, Prepared by Pacific Land Engineering

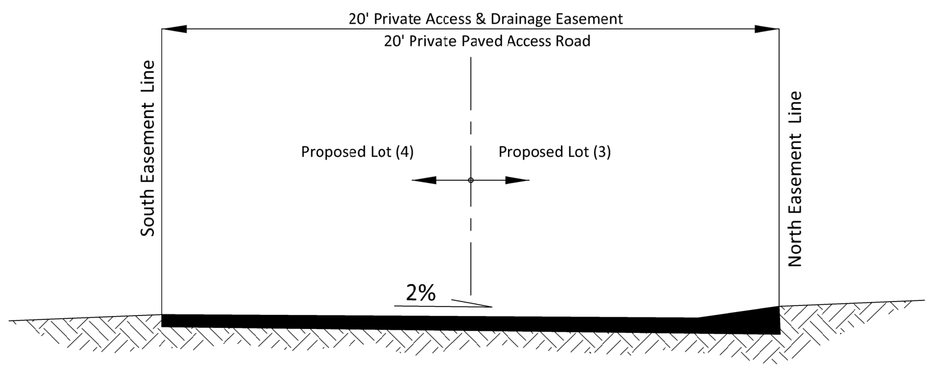


Plan View



Section View

72' X 14' X 8'
Concrete Detention Vault With Control Structure
N.T.S.

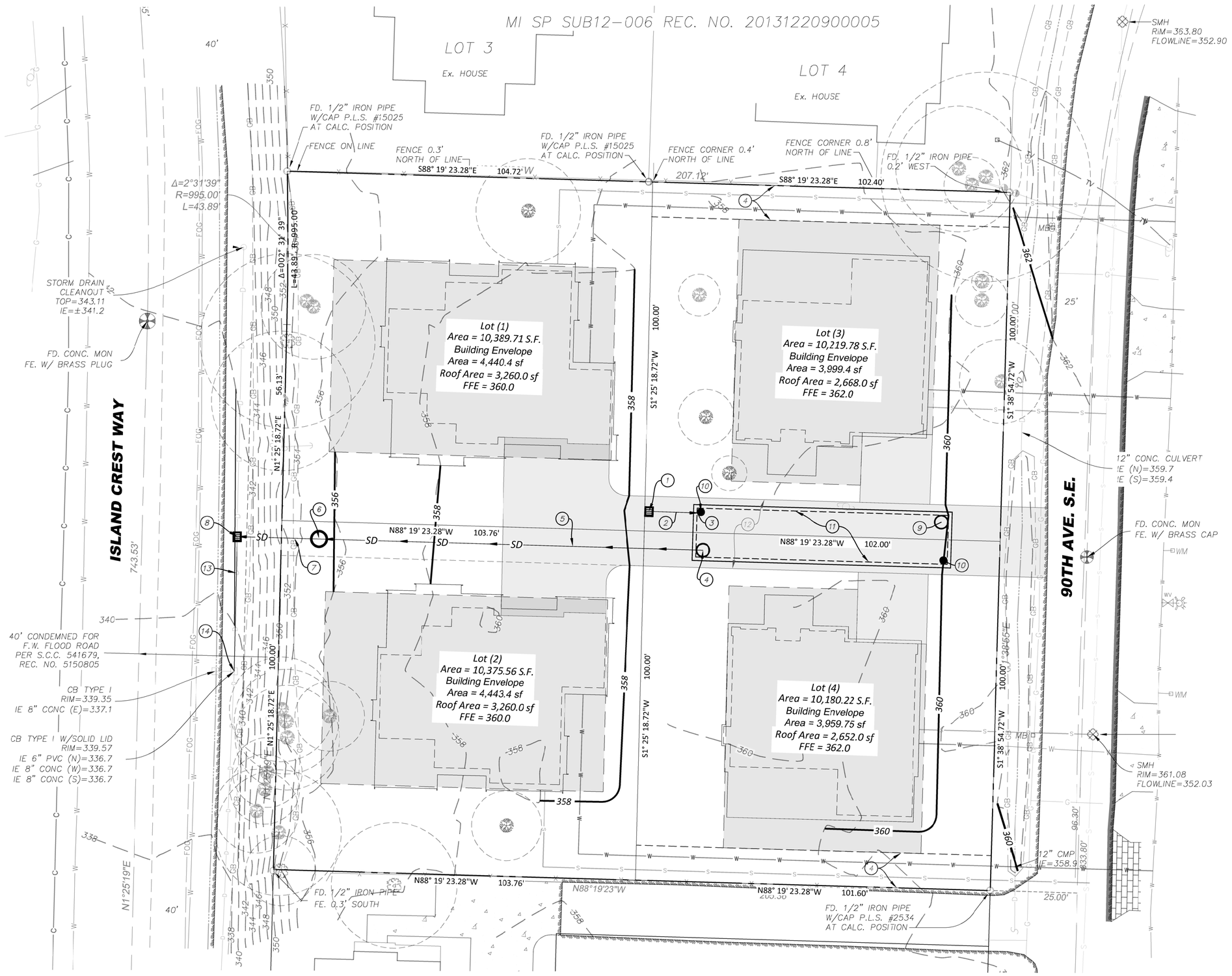


20' Wide Private Access Road

N.T.S.

SEC. 19, T.24N., R.5E., W.M.

MI SP SUB12-006 REC. NO. 20131220900005



20' 0' 20' 40'

SCALE : 1" = 20'

LEGEND:

- = POWER POLE
- = GUY POLE
- = GUY ANCHOR
- = OVERHEAD POWER
- = FIRE HYDRANT
- = WATER VALVE
- = WATER METER
- = WATER LINE (PAINTED LOCATION)
- = UNDERGROUND COMMUNICATION (PAINTED LOCATION)
- = TELEVISION RISER
- = UNDERGROUND TELEVISION (PAINTED LOCATION)
- = CATCH BASIN
- = STORM DRAIN LINE/ CULVERT
- = GAS VALVE
- = UNDERGROUND GAS LINE (PAINTED LOCATION)
- = SEWER MANHOLE
- = SEWER LINE
- = MAIL BOX
- = EVERGREEN TREE
- = DECIDUOUS TREE
- = WOOD BOARD FENCE LINE
- = FOG LINE (LANE STRIPE)
- = DITCH LINE
- = GRADE BREAK
- = EDGE OF PAVEMENT/CURB LINE
- = CONCRETE
- = CONCRETE PAVERS
- = GRAVEL
- = TBM = 60D SPIKE IN POWER POLE ELEV = 361.47 (NAVD 1988)

1. 48" Type - II CB W/Locking Grate Rim = 357.75 I.E. = 350.20 - 12" Ø, E
2. 14' - 12" Ø HDPE @ 5%
3. 12" Ø HDPE I.E. = 349.50
4. 48" Ø Locking Lid Marked Drain Rim = 358.50 I.E. = 349.50
5. 110' - 12" Ø HDPE @ 10%
6. 52" Type II SDMH W/ Locking Lid Marked Drain Rim = 355.0 I.E. = 338.50 12" HDPE, E & W
7. 24.20' - 12" Ø HDPE @ 3.1%
8. Type - I CB W/Locking Grate Rim = 340.75 I.E. = 337.75 New 12" Ø, E & S Remove Ex. 8" Ø, S
9. 48" Ø Locking Lid Marked Drain Rim = 360.0 I.E. = 349.50
10. 12" Ø Vent Opening W/Locking Cover.
11. Underground Storm Water Detention Vault 72' Long X 14' Wide X 8' Deep, See Detail Hereon.
12. 20' Wide Paved Private Access Road See Detail Hereon.
13. Remove existing 8" Storm Pipe, and install New 38.6 LF - 12" CMP @ 2.7%
14. Connect New 12" CMP to Existing CB I.E. = 336.70 - N

Preliminary Cut/Fill Summary

	Cut Factor	Fill Factor	Cut		Fill		Net
Surface3	**1.000**	**1.000**	1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>
Totals			1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Preliminary Grading and Utilities Plan

Plan Plotted For :
Initial Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
Permit Expediting Services · Inspection Services
Bellevue, WA · www.pacificlandwa.com · (425) 615 - 6160
info@pacificlandwa.com

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MAZEN S. HAIDAR
STATE OF WASHINGTON
36034
REGISTERED PROFESSIONAL ENGINEER

Date: 10 / 01 / 2022
STAMP IS NOT VALID UNLESS SIGNED AND DATED

Job Number:
220520 - PLE - 2211

DWG Date:
10 / 01 / 2022

Sheet No.
C - 6.0
OF
C - X.0

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RESIDENTIAL ◆ COMMERCIAL ◆ GOVERNMENT
Bellevue, WA 98005 ◆ (425) 615 – 6160
info@pacificlandwa.com

Level – I Drainage Report

Prepared for
Project 4833 MI
Mr. Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th Street, Unit 186
Mercer Island, WA 98040
(206) 265 – 0810
adisoncui@outlook.com

Prepared By:

Mazen Haidar, *PE*
Principal Engineer

Date Prepared:

November 1st, 2022

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UNLESS SIGNED AND DATED

Disclaimer,

This Level – I Drainage Report was prepared for Home Link LLC for Project 4833 4 - Lot Preliminary Short Plat. Pacific Land Engineering, Inc. (PLE), prepared this report for the exclusive use of its staff and its authorized agent(s) only. Any use of and/or reliance on this report and any of its contents, and/or any revisions to project's information / description, design plans, documentation, and/or the herein described development's improvements design concepts without the advanced and explicit written authorization from Pacific Land Engineering, Inc., (PLE) as well as the endorsing engineer is strictly forbidden.

o0o

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    - Downstream ¼ Mile Map.
    - Downstream ¼ Mile Photos.

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    - Lot Coverage Calculations.
    - Impervious Area Calculations.

4. Developed Site Hydrology

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    - Pollution Generating Impervious Area Calculations.
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5. References

    - City Notes for Pre-Application PRE22-028.

6. Special Reports

    - Geotechnical Report by GEO Group Northwest, Inc.
    - Geotechnical Addendum by GEO Group Northwest, Inc.
    - Arborist Report by ARBOR INFO LLC.

7. Engineer's Conclusion

    - Engineer's Conclusion.

o0o

Project Overview

- Existing Site Conditions and Hydrology,

The subject property is King County parcel number 4351300487 encumbering 41,165 sf / 0.945 acre (per survey) of fully developed land situated in Section 19, Township 24 North, Range 5 East and is legally described as LINDEY ADD TO Seattle N 200 FT of S 400 of VAC BLK 4 TGW POR VAC ST SC 679116 LESS ST LESS Mercer Island Trunk LN. The subject parcel is in residential zoned R – 8.4 area of the city of Mercer Island, more specifically, the subject parcel is located at 4833 90th Avenue SE, Mercer Island WA 98040. The subject parcel is boarded by fully developed residential properties across its north and south property lines, by Island Crest Way across its westerly property line, and by 90th Ave SE across its easterly property, see attached vicinity map exhibit for additional information. The subject parcel is currently occupied by existing house, attached garage / carport, and existing U-shaped gravel driveway all to be removed (TBR). The existing ground cover in the subject parcel predominantly consist of large cluster of mature trees, second growth understory vegetation, and single-family back yard lawns. The existing site topography is oriented east to west with overall grade slope of 2% to 5% before changing to over than 20% within Island Crest Way right-of-way across the subject parcel westerly property line.

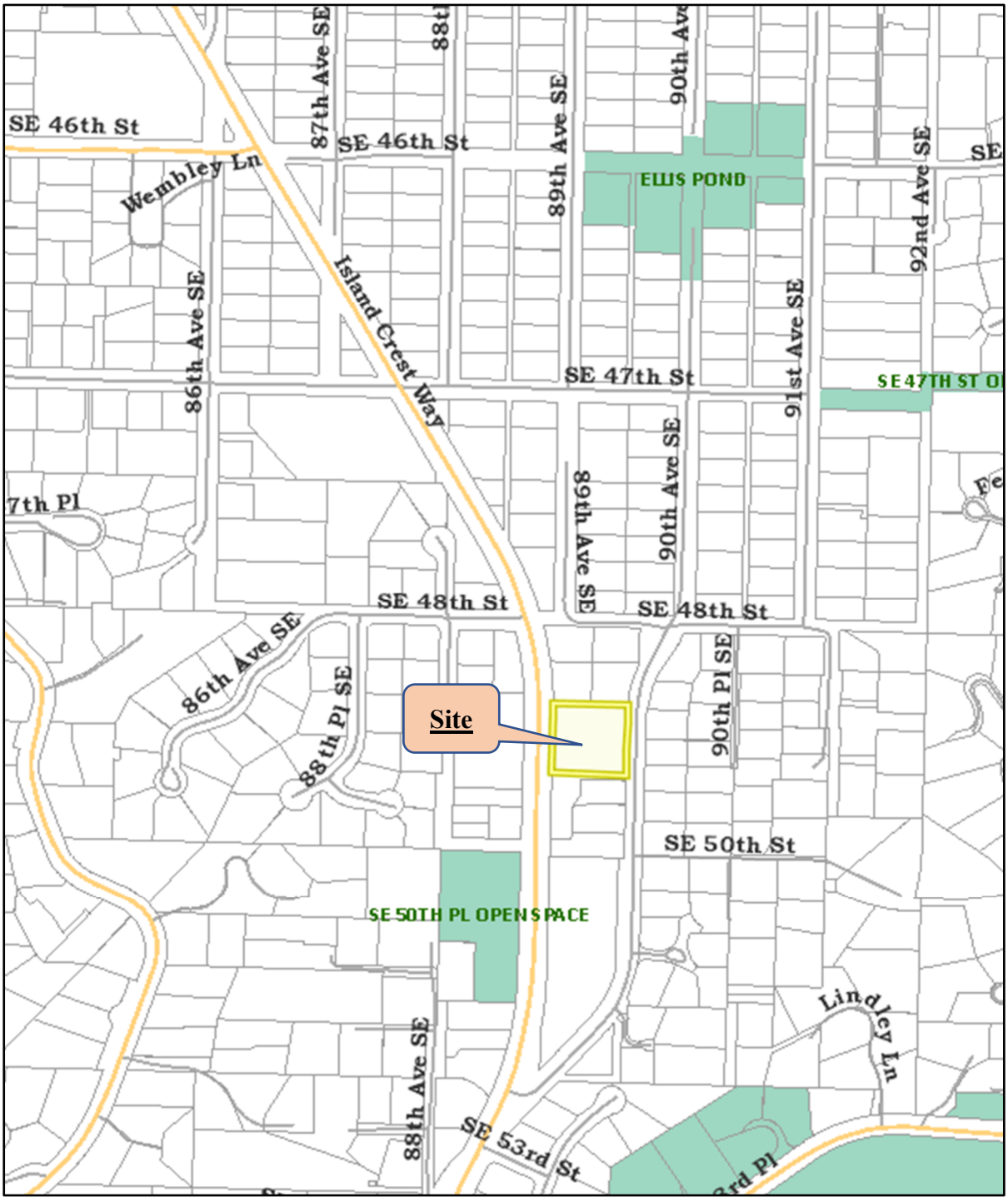
Public Water and sewer system do exist in 90th Ave SE across the easterly frontage, the existing house appears connected to existing public water system and served by existing site sewage system to be removed. Surface flows appears to sheet flow in the westerly direction which is the natural discharge location for the subject site. Based on the attached site survey, and the city IGS website there appear no upstream surface flows tributary to the subject parcel, and surface flows from 90th Ave SE are intercepted by an existing roadside ditch running across the subject parcel easterly property line whereby surface flows continue southerly away from the subject parcel.

Please refer to attached existing site conditions map exhibit, attached site aerial map exhibit, attached site photos exhibit, and to the recent site survey in the attached Civil Plans set for additional information.

The subject parcel is currently accessed by 90th Ave SE which is a fully developed paved city street. The site soils have been identified as Vashon subglacial till soils and based on the Information Geography Services (IGS), the subject site appears partially located within Landslide and Erosion Hazard Areas, but it is not located in or adjacent to other type of critical areas, please refer to attached various map exhibits for additional information.

To best evaluate the site soils conditions a full Geotechnical Report dated February 18th, 2022 was prepared by GEO Group Northwest, Inc. for the subject site, please see Special Reports Section in this report for more information.

o0o



N.T.S.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Vicinity Map			

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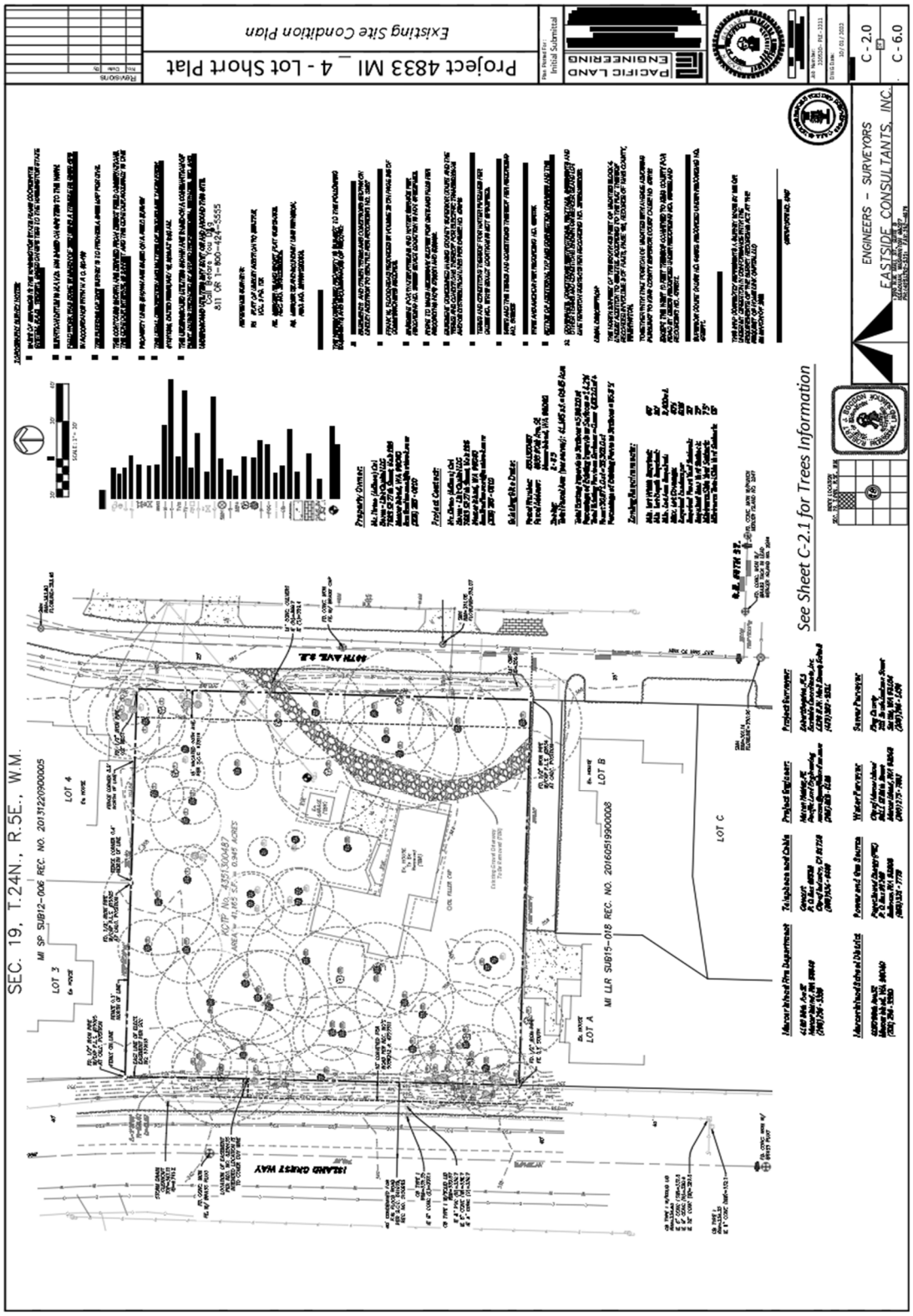

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Existing Site Conditions			

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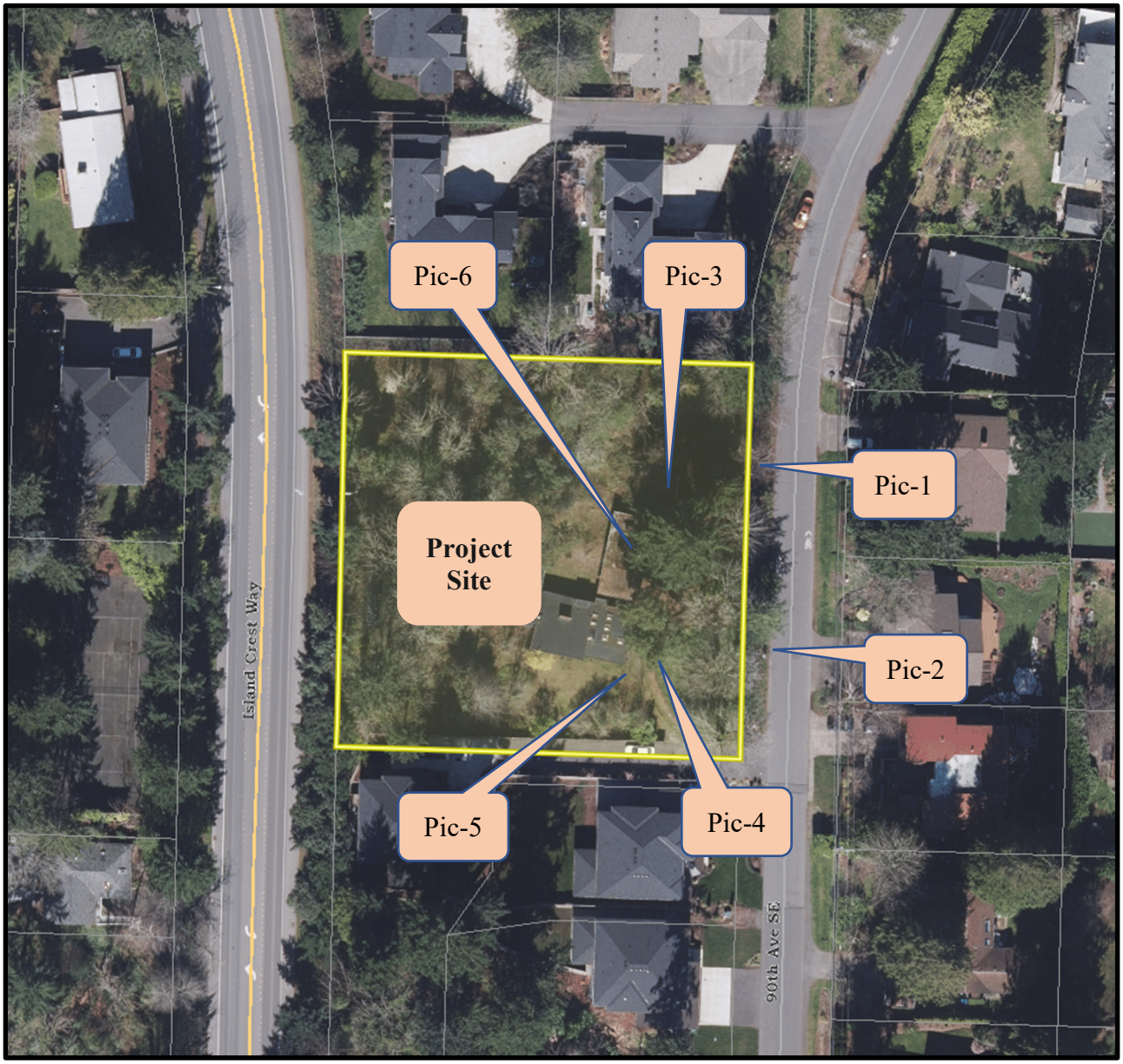

N.T.S.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Site 2020 Aerial Photo			

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Pic-1, Looking north along 90th Ave SE at site entry

Pic-2, Looking south along 90th Ave SE at site entry

Pic-3, Looking SW at existing house

Pic-4, looking NW at existing house

Pic-5, looking Northeast at existing house

Pic-6, Looking South at existing house

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Site Photos			

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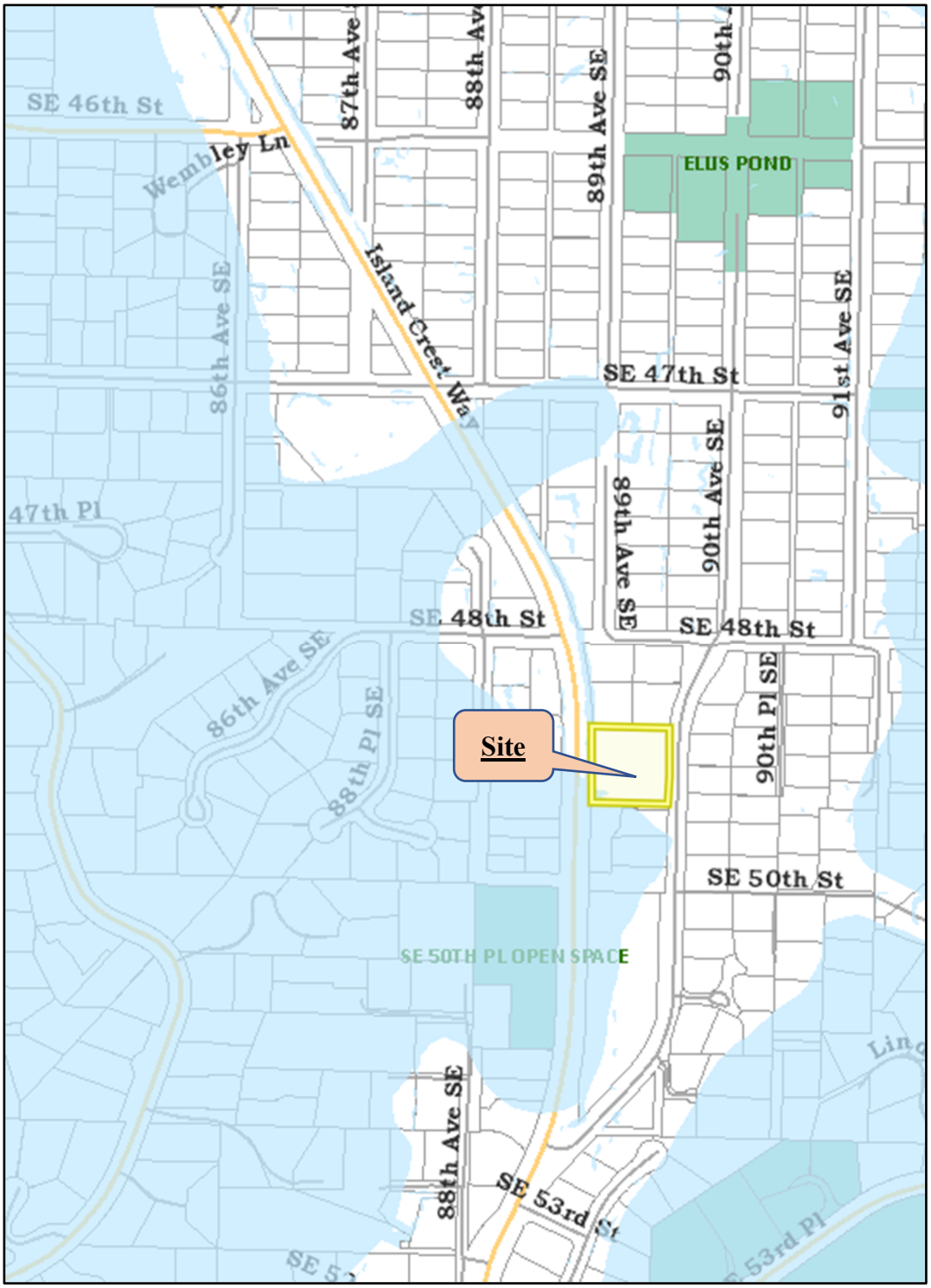

N.T.S

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Infiltration Infeasibility			

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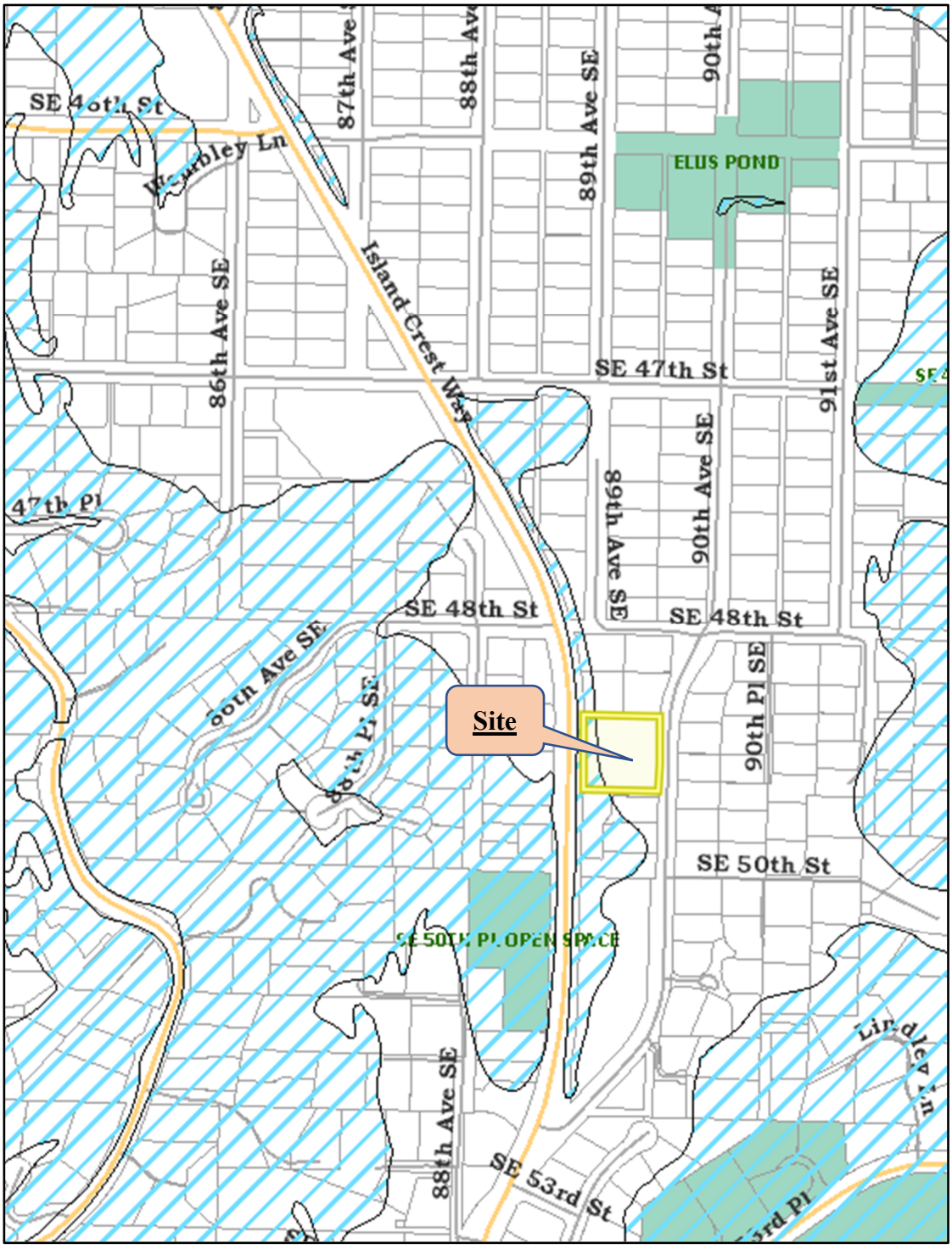

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Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Landslide Map			

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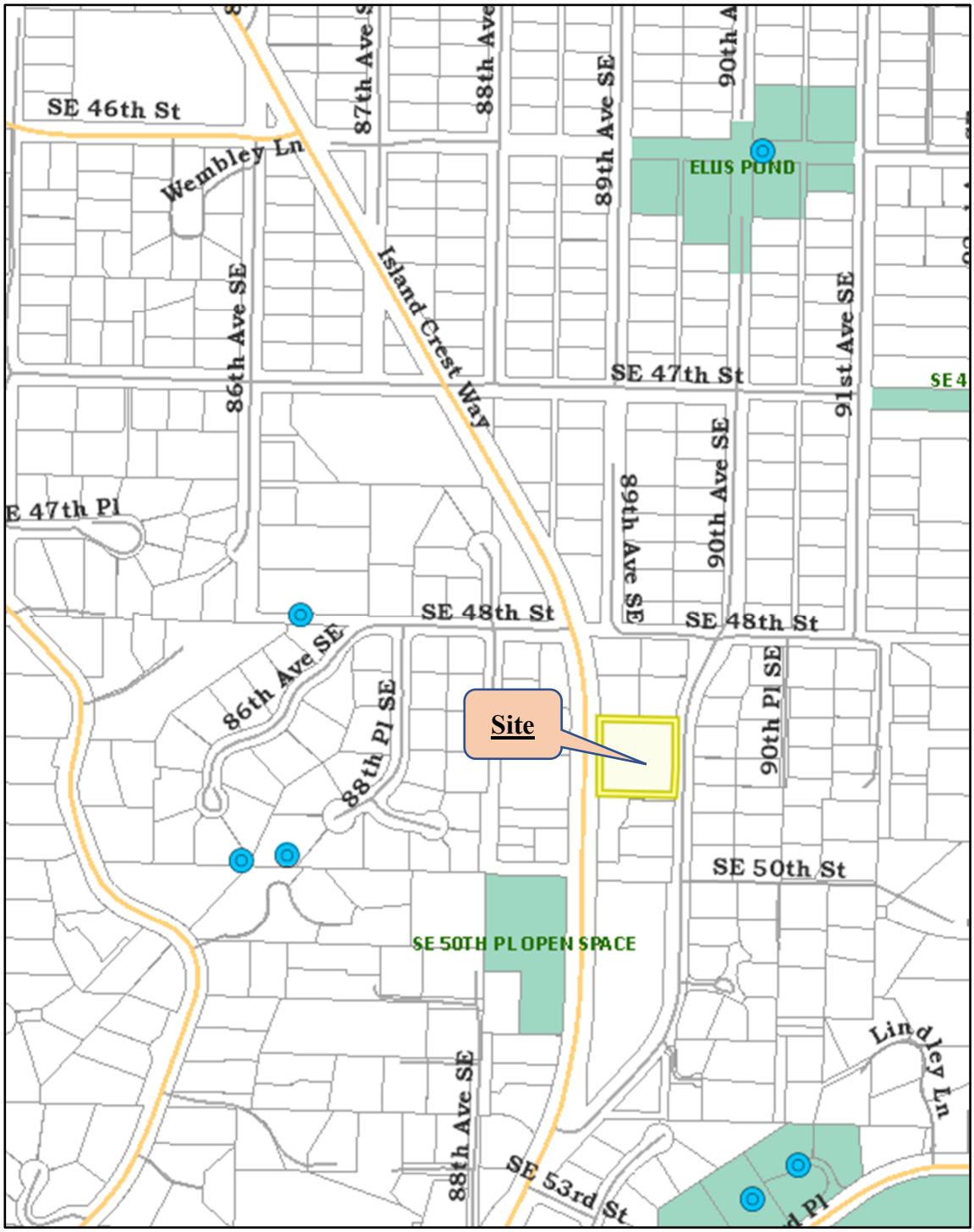

N.T.S.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Spring Location Map			

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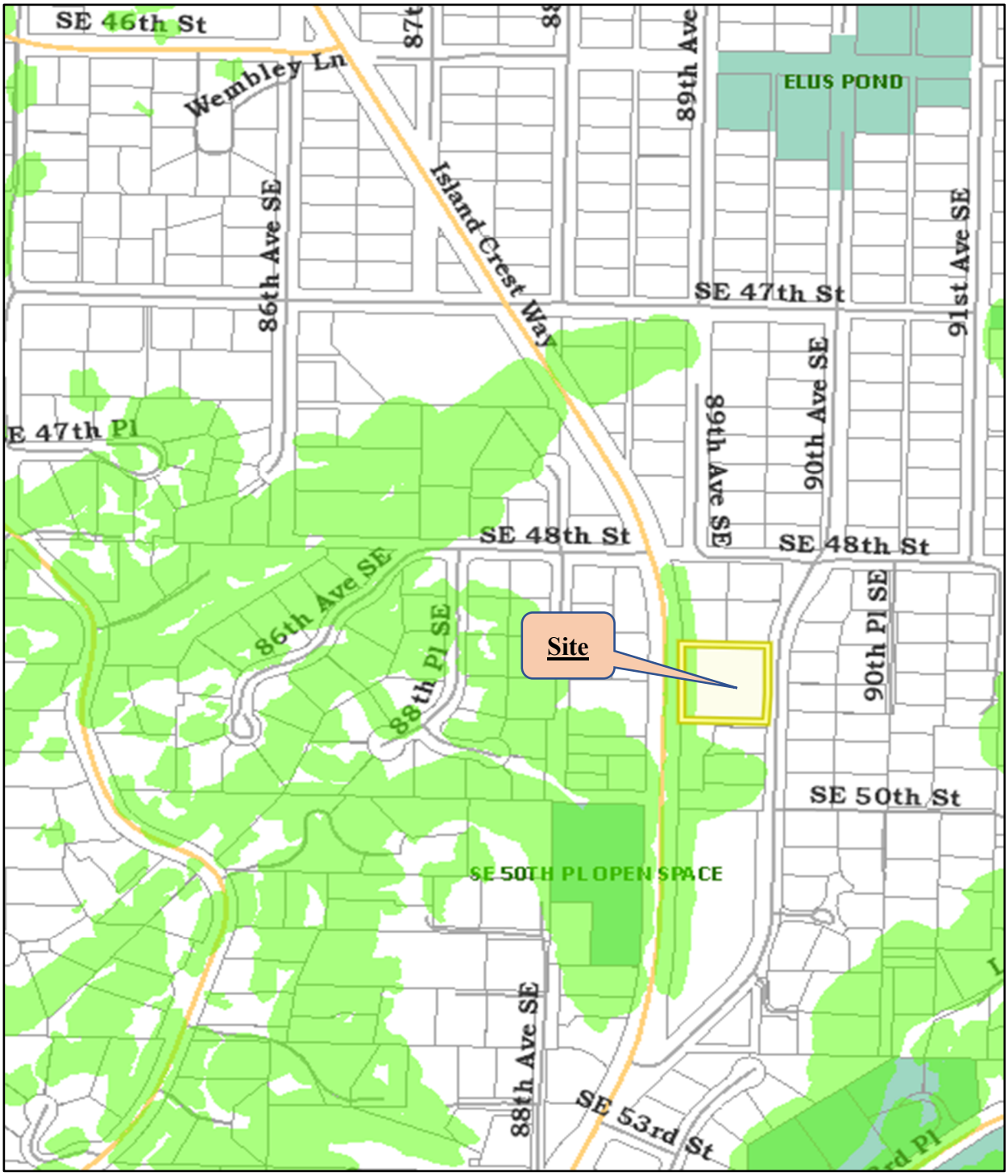

N.T.S

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S.	Date	10 / 01 / 2022
Controlled Slope Map			

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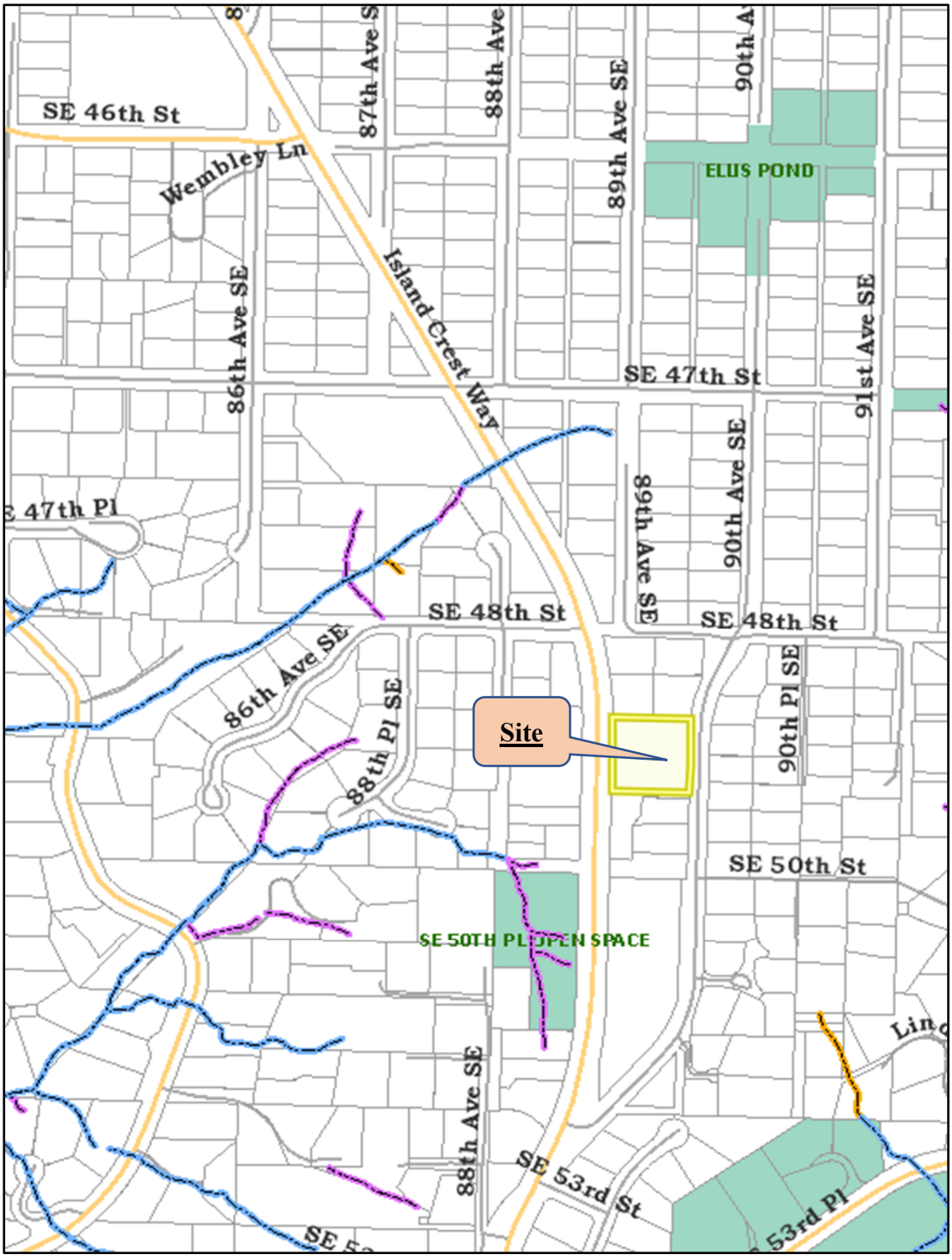

N.T.S

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Type NP and NS (No-Fish)			

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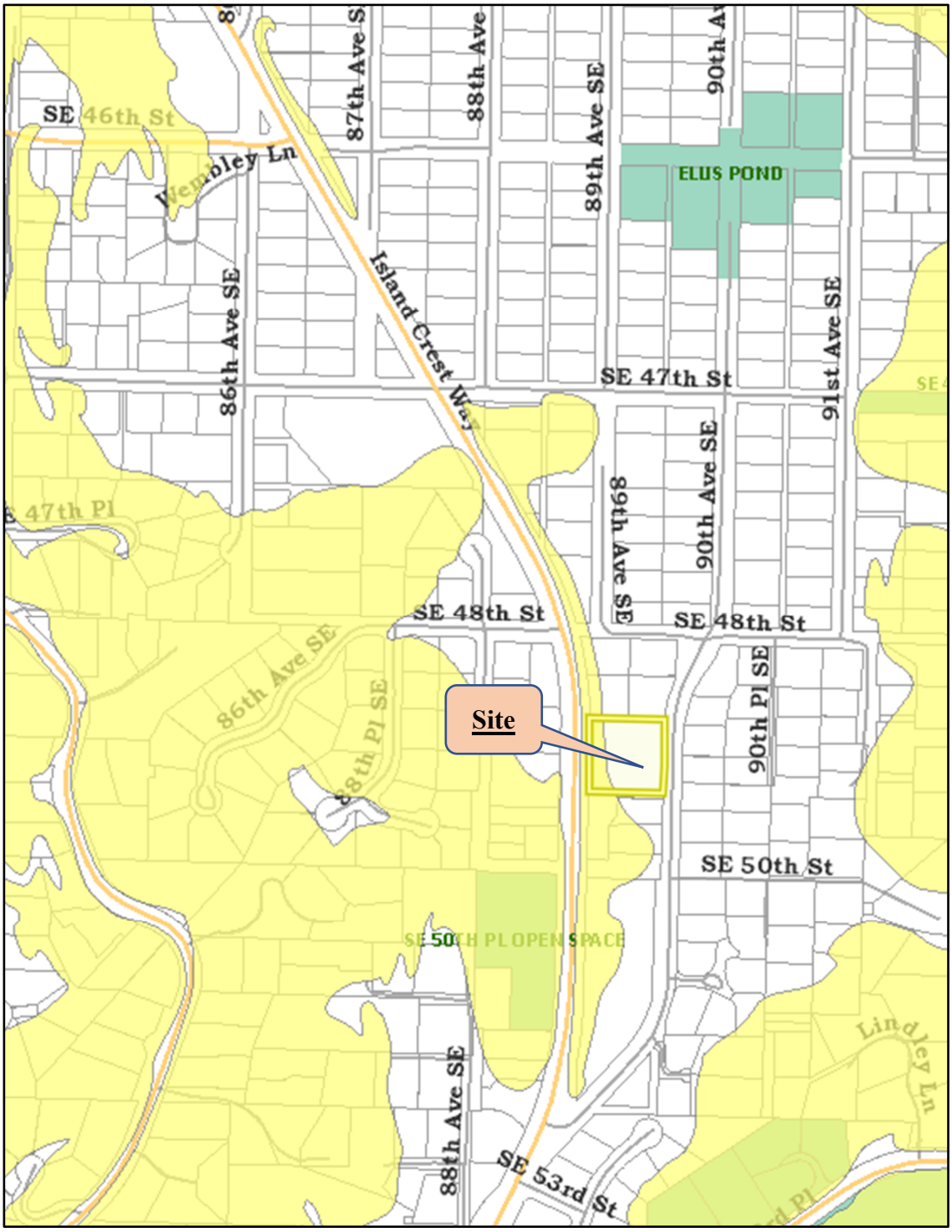

N.T.S

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Erosion Hazard Map			

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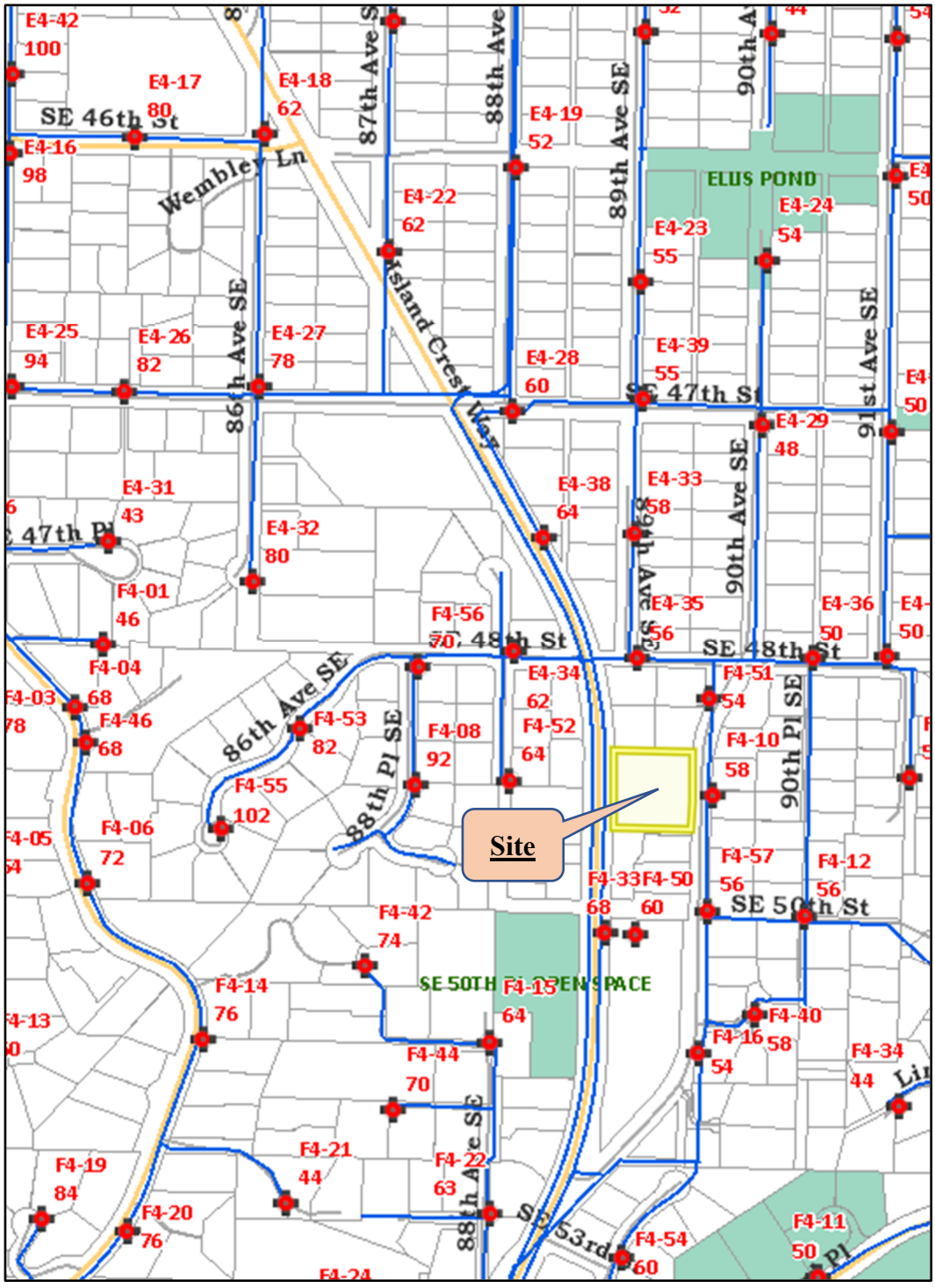

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Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Water Mains and Fire Hydrant			

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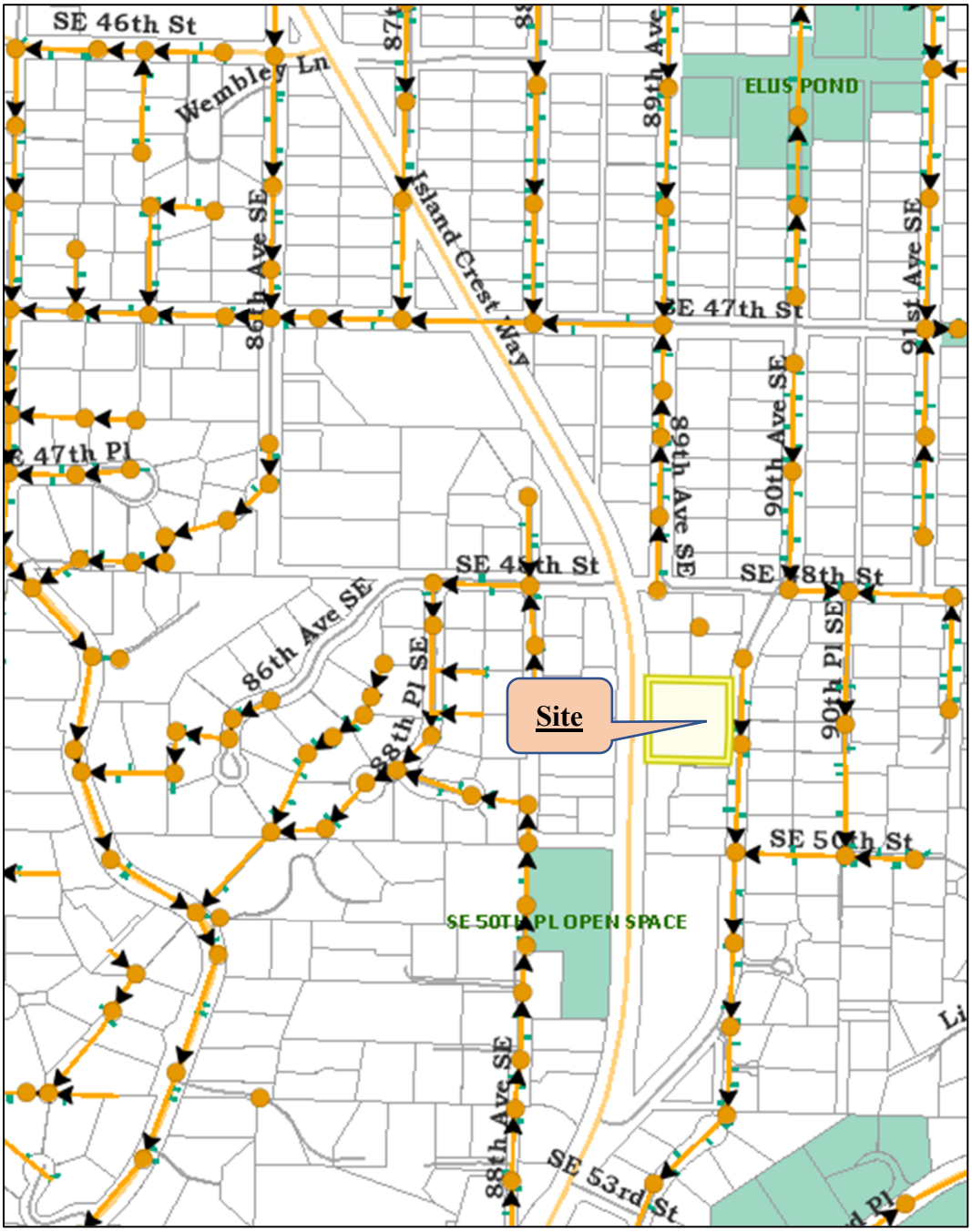

N.T.S.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S.	Date	10 / 01 / 2022
Sewer Mains and Sewer Manholes Location			

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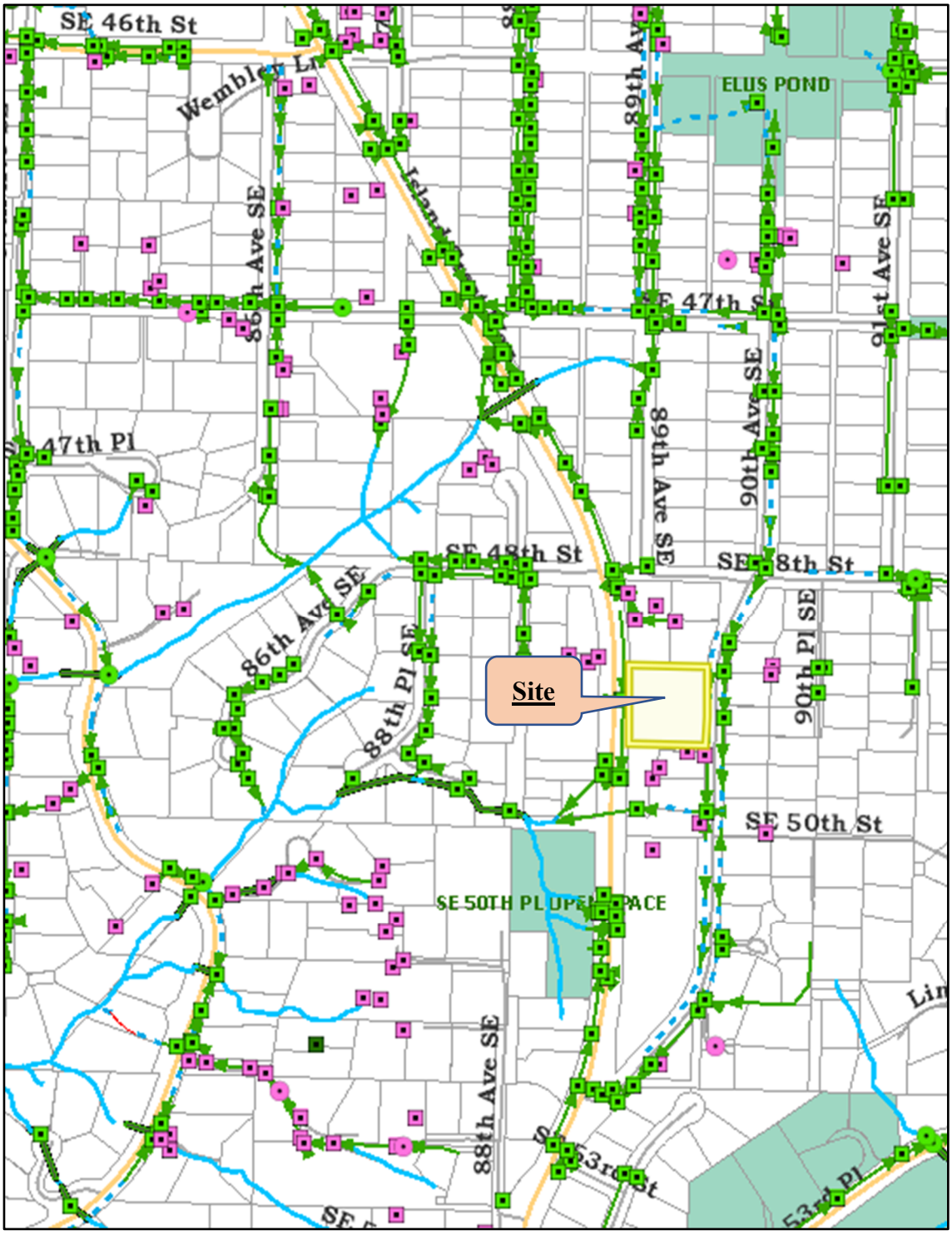

N.T.S.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Public Storm System Map			

PACIFIC LAND ENGINEERING

- Downstream ¼ Mile Drainage Analysis,

  Pursuant to the city of Mercer Island Drainage Code Requirement and the 2012 Washington State Department of Ecology (DOE) Drainage Manual for Western Washington as amended in 2014, a Level – I downstream analysis was conducted on May 28th, 2022 which was cloudy day following series of prior rainy days. The downstream analysis extended south and southwesterly in the natural discharge location to Lake Washington distance of 3,392' which is well beyond the ¼ mile downstream of the subject parcel.

  Please refer to the attached ¼ mile Downstream Drainage Course Map Exhibit and the attached downstream drainage course photos in the following pages as you review this analysis.

  As stated, the natural discharge location of the project site is to the west, however there may be very small site areas along the easterly property line that may drain to the existing roadside ditch on the westerly side of the 90th Ave SE, for this reason we followed and investigated the drainage course along east and west of the subject parcel. It is important to note that both drainage courses do combine approximately 675' downstream of the subject parcel.

  Small amount of the site surface runoff sheet flow easterly and southerly off the project site to collect in an existing roadside ditch on the west side of the 90th Ave SE before entering an existing 12" culvert at **Point-1** in the vicinity of the southeast corner of the subject parcel. Surface flows continue southerly in this existing culvert approximately 183' before arriving at an existing catch basin at **Point-2**, turning westerly surface flows continue in an existing tightline storm system and open drainage ditch approximately 178' through private properties before arriving at another storm tightline system and before crossing under Island Crest Way and continues southwesterly in heavily vegetated natural drainage channel approximately 224' before arriving at **Point – 4**, continuing southwesterly surface flows travel in this natural drainage channel approximately 90' before arriving at **Point – 5**. In the meantime, most of the site surface runoffs sheet flow westerly over Island Crest Way road-bank at **Point – 1A**, thereafter, surface flows continue southerly along the east edge of Island Crest Way approximately 200' before entering an existing catch basin at **Point – 1B**, turning west, surface flows cross under Island Crest Way in an existing storm conveyance system traveling approximately 50' before arriving at **Point – 3**, continuing southwesterly surface flows travel approximately 175' before arriving at **Point – 5**. The combined surface flows continue westerly approximately 410' through series of storm tightlines and heavily vegetated drainage channels through inaccessible private property before arriving at an existing 18" culvert at **Point – 6**, thereafter, surface flows continue southwesterly in an existing storm conveyance system approximately 210' before discharging in another inaccessible drainage channel within private property at **Point – 7**. Also continuing southwesterly surface flows travel approximately 500' in heavily vegetated drainage channel within private properties before entering an existing storm culvert on the north side of West Mercer Way at **Point – 8**, thereafter, surface flows continue southwesterly approximately 110' before discharging in an existing heavily vegetated natural drainage channel on the south side of parcel address 5045

West Mercer Street at **Point – 9**, also continuing southwesterly in heavily vegetated inaccessible drainage channel within private properties approximately 830' before arriving at **Point – 10**. Turning northwest surface continue in said heavily vegetated drainage channel for another 560' before arriving at **Point – 11** on the south side of 84th Ave SE withing parcel address 5047 84th Ave Southeast. Thereafter, surface flows continue westerly forming natural stream channel approximately 100' before arriving at **Point – 12**, also continuing westerly said stream flows travel approximately 50' before arriving at **Point – 13**, thereafter, surface flows enter an existing 24" concreate storm culvert at **Point – 14**, before traveling westerly another 300' westerly in said culvert to finally joint the waters of Lake Washington. The Level – I downstream analysis and investigation were ended at this location approximately 3,495' downstream of the subject site.

During our site visits and the ¼ downstream investigation we did not observe any signs of erosion, scouring, or flooding problems, the natural drainage channels appear stable and the existing storm conveyance systems appear functioning with as expected no problems.

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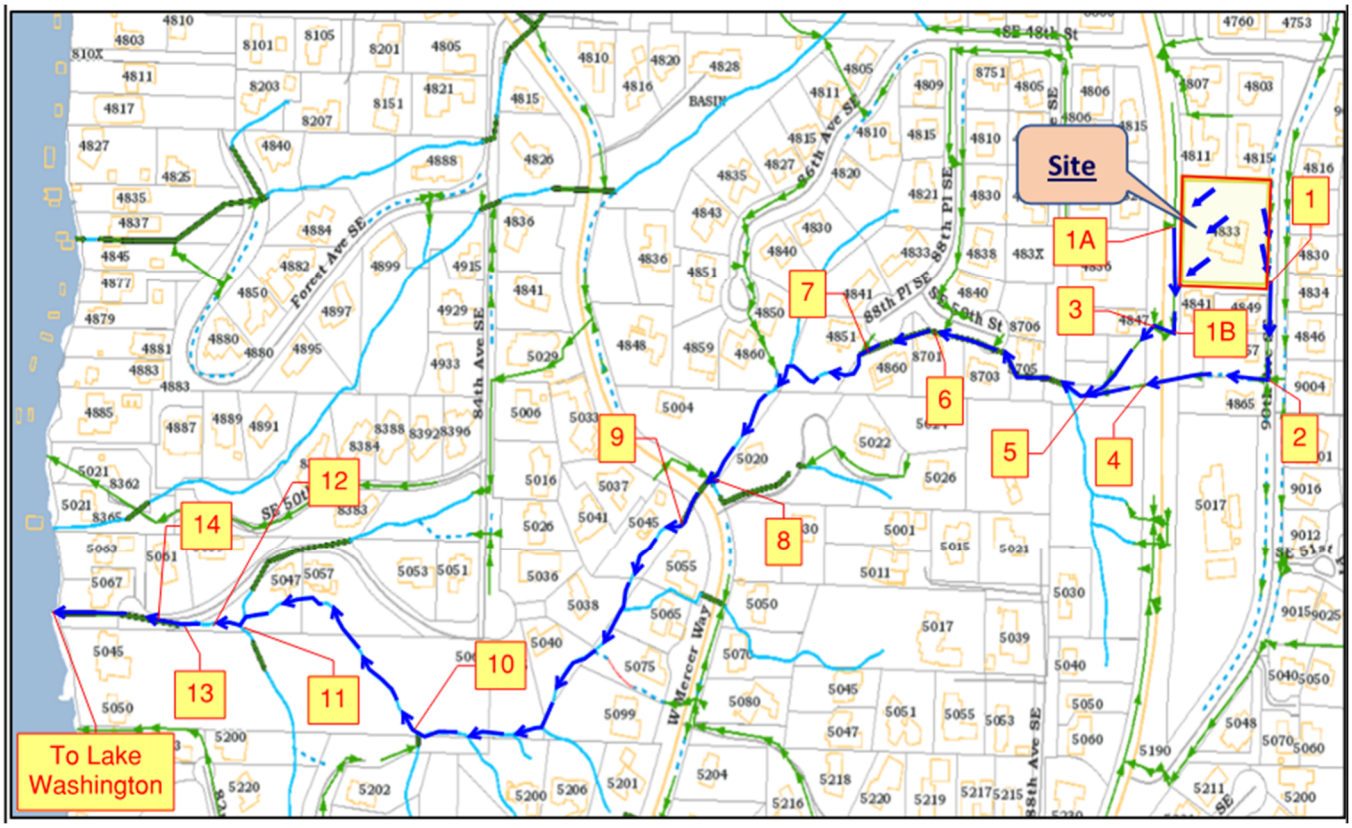


Total 3,495 LF of Downstream Drainage Course Evaluated

N.T.S

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Downstream ¼ Mile Drainage			

PACIFIC LAND ENGINEERING

Point – 1, Existing 12” Culvert.

Point – 2, Surface flows turn westerly in existing conveyance system.

Point – 1A, Surface flows leaves the site in sheet flow Island Format.

Point – 1B, Surface flows collect in Ex. CB in Crest Way.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Photos of Downstream ¼ Mile			

PACIFIC LAND ENGINEERING

Point – 3, Surface flows enter existing CB on west side

Point – 4, Surface flows enter natural of Island Crest Way.

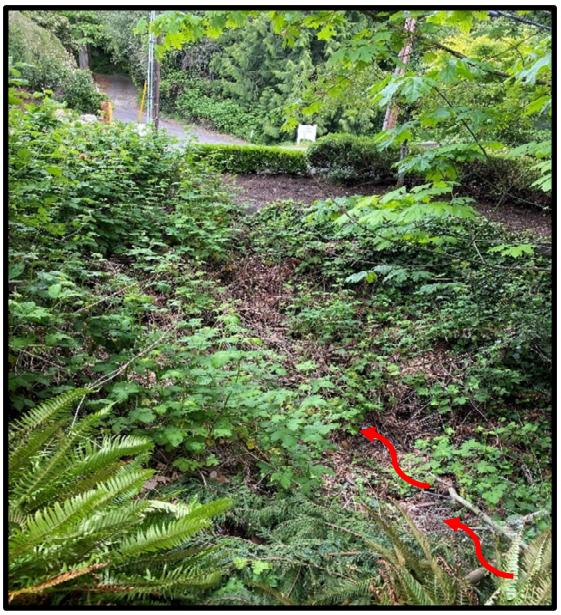
Point – 5, Combined Surface flows continue westerly

Point – 6, Surface flows enter Ex. 18" Culvert

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Photos of Downstream ¼ Mile			

PACIFIC LAND ENGINEERING

Point – 7, Surface flows discharge in heavily vegetated natural drainage channel.



Point – 8, Surface flows enter existing culvert system under West Mercer Way.

Point – 9, Surface flows discharge in existing natural drainage channel.

Point – 10, Surface flows continue in Existing Natural drainage channel.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Photos of Downstream ¼ Mile			

PACIFIC LAND ENGINEERING

Point – 11, Surface flows continue in natural drainage channel.

Point – 12, Surface flows continue in natural drainage channel.

Point – 13, Surface flows continue in natural Drainage channel.

Point – 14, Surface flows enter an existing 24" concrete culvert.

Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Photos of Downstream ¼ Mile Drainage Course			

PACIFIC LAND ENGINEERING

- **Developed Site Conditions,**

As mentioned, the subject parcel is located within residential zoned R-8.4 area of the city of Mercer Island and therefor, the development proposal is to sub-divide the subject parcel into 4 separate residential lots consistent with MICC 19.02.020 for R-8.4 zone.

The proposed development completed the first phase of development permitting process with the city of Mercer Island under pre-application meeting number PRE22 – 028, and under which city staff issued Pre-Application Notes document dated May 17th, 2022 that included project summary, staff notes, and answers to specific questions raised by the applicant and his team, see References Section in this Report for more information.

Pursuant MICC 19.02.020 – Development Standards for residential R-8.4 zone and the above referenced pre-application meeting notes, the proposed development will create a total of four residential new lots as follows:

Lot #	Lot Area (SF)	Building Setbacks						Buildg. Envelope Area (SF)	Maximum Roof Area (SF)	Dwy. Area (SF)	Lot Cov. Area (SF)	% of Lot Cov.	% of Landscape
		Front	Rear	E	W	N	S						
1	10,389.71	20'	25'	10'	13'			4,440.40	3,260.00	865.50	4,125.50	40	60
2	10,375.56	20'	25'	10'	13'			4,443.40	3,260.00	853.60	4,113.60	40	60
3	10,219.78	20'	25'			10'	15'	3,999.40	2,668.00	400.00	4,088.00	40	60
4	10,180.22	20'	25'			15'	10'	3,959.75	2,652.00	400.00	4,072.00	40	60

Additionally, the proposed development will create 102' long X 20' wide private access and drainage easement with 20' paved access road to serve all proposed 4 lots. The proposed 4-lot short plat will also be served by existing public utilities (water, sewer, gas, power, telephone, and cable) in 90th Ave. SE across the easterly property line of the subject parcel. Consistent with city of Mercer Island Drainage Code Requirement and 2012 Washington State Department of Ecology (DOE) Drainage Manual for Western Washington as amended in 2014, the proposed 4-lot short plat will provide 72' long X 14' wide X 8' deep underground concrete stormwater detention / retention (R/D) vault under the proposed on-site private paved access road to mitigate for the site developed conditions, see preliminary design calculations in the following pages.

Refer to attached preliminary short plat map, the preliminary grading and drainage map, and the attached Civil Plans set for additional information.

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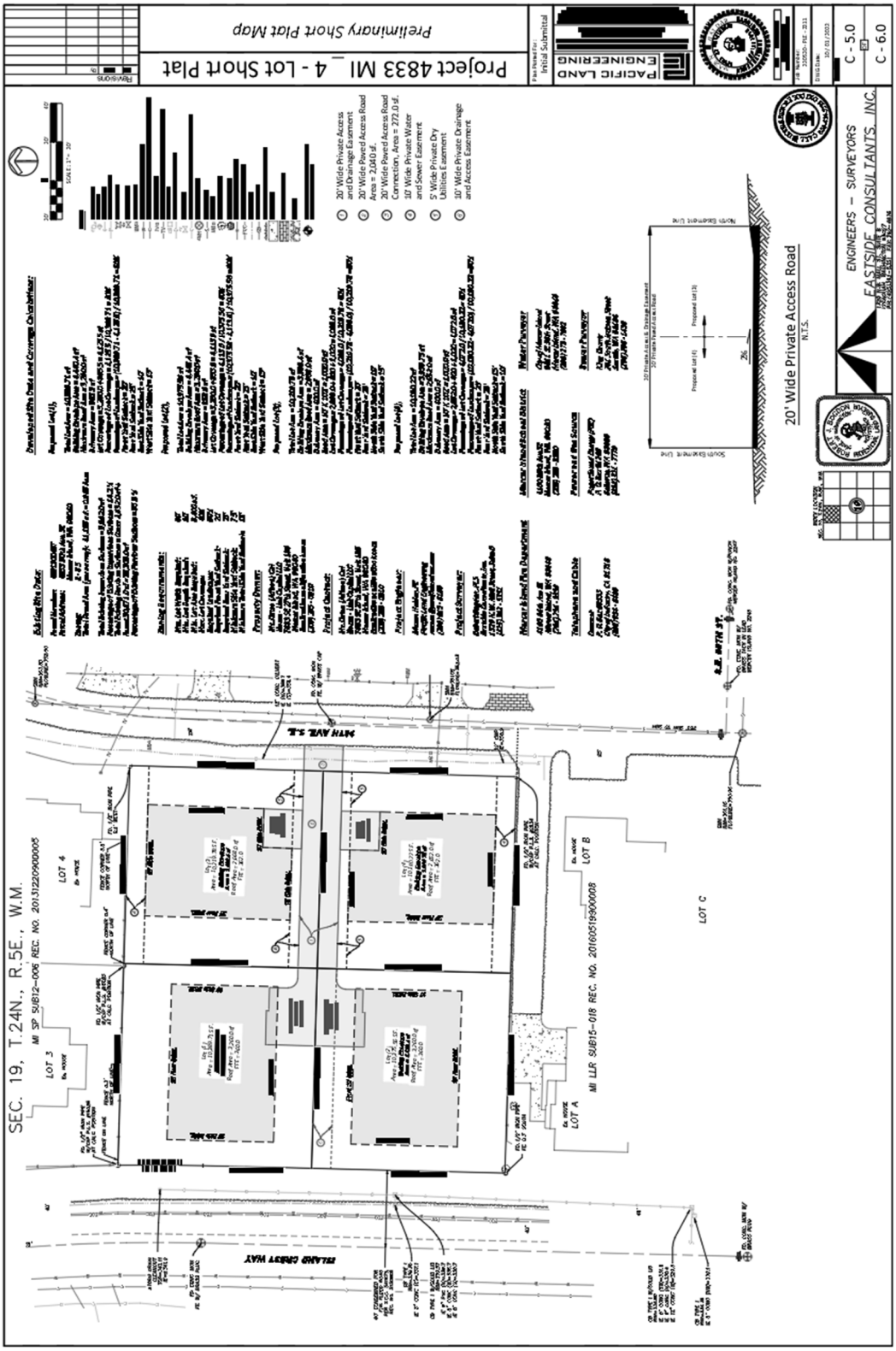
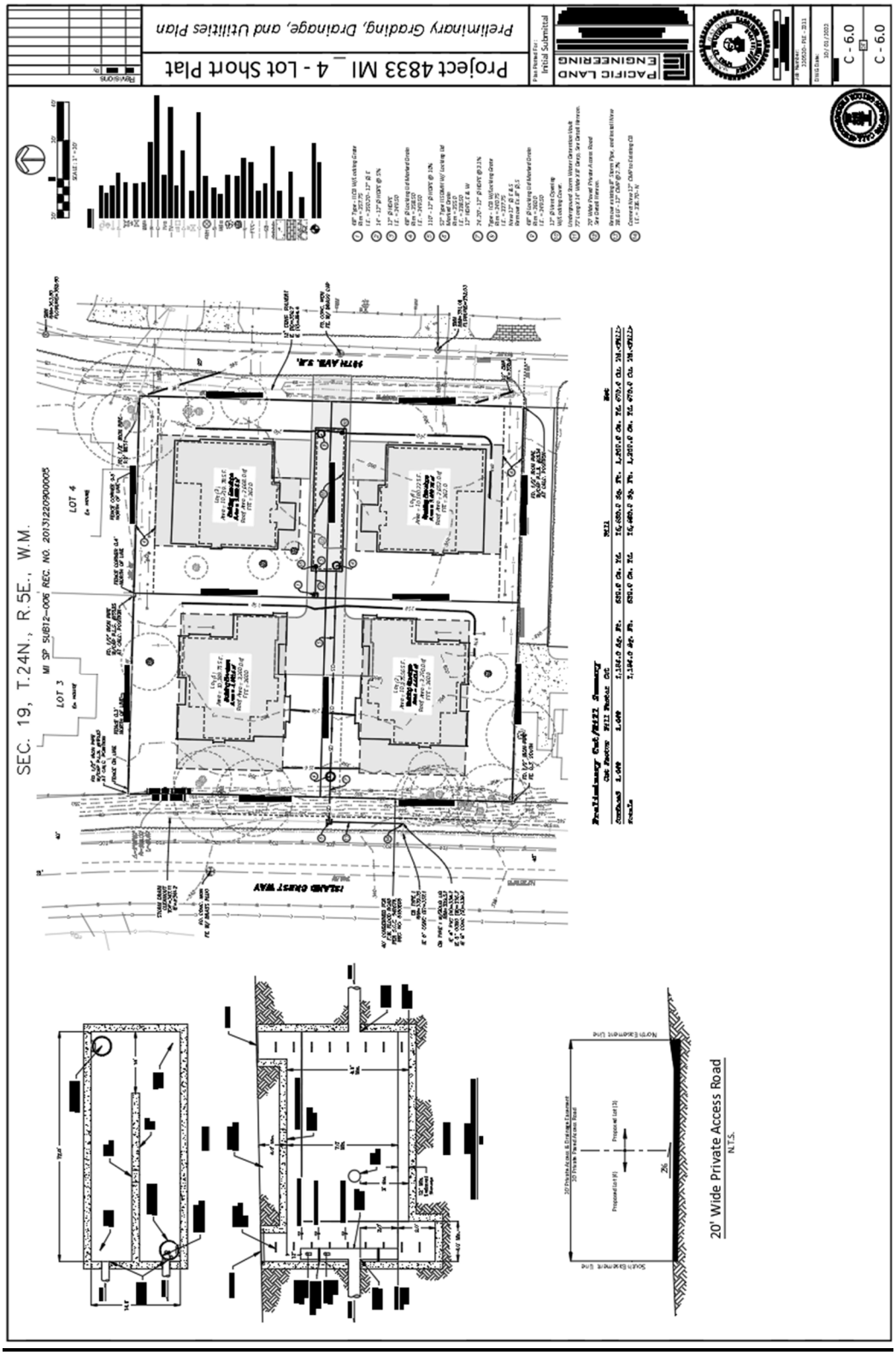


Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Preliminary Short Plat Map			

PACIFIC LAND ENGINEERING



Project	Project 7833 MI 4 – Lot		
Scal	N.T.S	Date	10 / 01 / 2022
Preliminary Grading and Drainage			

PACIFIC LAND ENGINEERING

Developed Site Hydrology,

As mentioned, consistent with city of Mercer Island Drainage Code Requirement and 2012 Washington State Department of Ecology (DOE) Drainage Manual for Western Washington as amended in 2014, the proposed 4-lot short plat will provide 72' long X 14' wide X 8' deep underground concrete stormwater detention / retention (R/D) vault under the proposed on-site private paved access road to mitigate for the site developed conditions.

In concept, all surface flows in the site's developed conditions including but not limited to all proposed roof tops, proposed access road, all proposed driveways, porches and patios, and yards will be collected and tightline to the proposed underground R/D vault. This vault will be equipped with control riser and two orifices consistent with DOE design guidelines / requirements for Conservation / Stream Protection Standards, see vault preliminary design and sizing calculations below. Also pursuant to the referenced DOE manual since the new pollution generating impervious surfaces (NPGIS) as shown below is less that 5,000 sf, compliance with water quality standards is not warranted for this project and none will be provided.

Pollution Generating New Impervious Surfaces Calculation,

On-site access road area = 20' wide X 102' long = 2,040 sf.
Area of access road connection with 90th Ave SE = 272.0 sf.
Lot (1) driveway area = 865.50 sf.
Lot (2) driveway area = 853.60 sf.
Lot (3) driveway area = 400.00 sf.
Lot (4) driveway area = 400.00 sf
Total new pollution generation impervious surface area = 4,831.10 sf < 5,000.0 sf OK

Retention - Retention (R/D) Concrete Vault Preliminary Sizing / Design Calculation,

To size this system, we utilized the 2012 Western Washington Hydrology Model version 4.2.18, and we begin with area calculations for the existing and developed site conditions as follows:

Existing Site Conditions,

Surface Type	Ex. Impervious SF	Ex. Impervious AC	Ex. Pervious SF	Ex. Pervious AC	Total Ex. Impervious (AC)	Total Ex. Pervious (AC)	Total Site Area (AC)
Ex House (Roof)	4,115.0	0.094					
Ex Driveway (Gravel)	1,580.0	0.036					
Ex. DWY Connc. (Gravel)	272.0	0.006					
Existing Grass			4,632.0	0.106			
Existing Forest			30,833.0	0.708			
Total Surface Areas	**5,967.0**	**0.137**	**35,465.0**	**0.814**	**0.137**	**0.814**	**0.951**

Developed Site Conditions,

Surface Type	New Impervious SF	AC	New Pervious SF	AC	Total New Impervious (AC)	Total New Pervious (AC)	Total Site Area (AC)
Access Road (20' X 102')	2,040.00	0.047			0.047		
Access Road Connection	272.00	0.006			0.006		
Lot - 1, Maverick House							
New Driveway	865.50	0.020					
New House	**3,260.00**	0.075					
Total Grass			6,264.21	0.144			
Total New Surfaces					0.095	0.144	
Lot - 2, Maverick House							
New Driveway	853.50	0.020					
New House	**3,260.00**	0.075					
Total Grass			6,262.06	0.144			
Total New Surfaces					0.095	0.144	
Lot - 3, Foxglove House							
New Driveway	400.00	0.009					
New House	**3,106.00**	0.071					
Total Grass			5,693.78	0.131			
Total New Surfaces					0.080	0.131	
Lot - 4, Fox Glove House							
New Driveway	400.00	0.009					
New House	**3,106.00**	0.071					
Total Grass			5,654.22	0.130			
Total Surfaces					0.080	0.130	
Total Site Areas					**0.403**	**0.548**	**0.951**

Please refer to following pages for the model calculations, inputs, and outputs.

Controlled surface flows will exist the R/D system to discharge in 16' deep Type – II Storm Manhole before discharging into existing public storm system in Island Crest Way while maintaining the direction of the natural discharge location. Please refer the attached Geotechnical Addendum in support of the R/D system located in the Special Reports section of this report.

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WWHM2012

PROJECT REPORT

General Model Information

Project Name:	Project 4833 MI_072322
Site Name:	Project 4833 MI
Site Address:	4833 90th Ave SE
City:	Mercer Island
Report Date:	8/22/2022
Gage:	Seatac
Data Start:	1948/10/01
Data End:	2009/09/30
Timestep:	15 Minute
Precip Scale:	1.000
Version Date:	2021/08/18
Version:	4.2.18

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Forest, Flat	0.708
C, Lawn, Flat	0.106
Pervious Total	0.814

Impervious Land Use	acre
ROOF TOPS FLAT	0.094
DRIVEWAYS FLAT	0.043
Impervious Total	0.137
Basin Total	0.951

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C, Lawn, Flat	0.548
Pervious Total	0.548

Impervious Land Use	acre
ROADS FLAT	0.053
ROOF TOPS FLAT	0.292
DRIVEWAYS FLAT	0.058
Impervious Total	0.403
Basin Total	0.951

Element Flows To:

Surface	Interflow	Groundwater
Project 4833 - Vault	Project 4833 - Vault	

Routing Elements
Predeveloped Routing

Mitigated Routing

Project 4833 - Vault

Width: 14 ft.
Length: 71.4 ft.
Depth: 7 ft.
Discharge Structure
Riser Height: 6 ft.
Riser Diameter: 12 in.
Orifice 1 Diameter: 0.84 in. Elevation:0 ft.
Orifice 2 Diameter: 1.2 in. Elevation:4.5 ft.
Orifice 3 Diameter: 0.76 in. Elevation:5.5 ft.
Element Flows To:
Outlet 1 Outlet 2

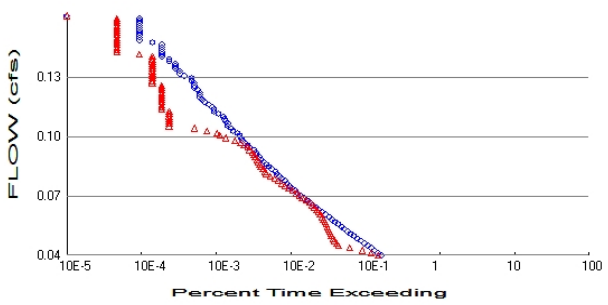
Vault Hydraulic Table

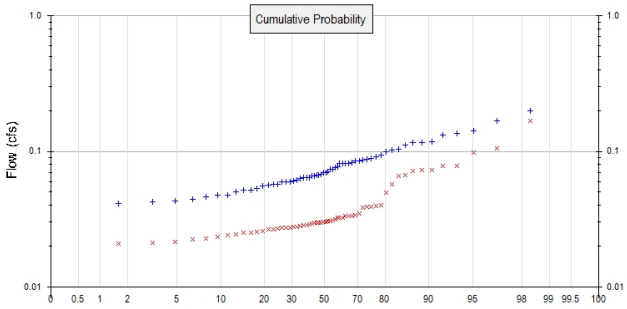
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.022	0.000	0.000	0.000
0.0778	0.022	0.001	0.005	0.000
0.1556	0.022	0.003	0.007	0.000
0.2333	0.022	0.005	0.009	0.000
0.3111	0.022	0.007	0.010	0.000
0.3889	0.022	0.008	0.011	0.000
0.4667	0.022	0.010	0.013	0.000
0.5444	0.022	0.012	0.014	0.000
0.6222	0.022	0.014	0.015	0.000
0.7000	0.022	0.016	0.016	0.000
0.7778	0.022	0.017	0.016	0.000
0.8556	0.022	0.019	0.017	0.000
0.9333	0.022	0.021	0.018	0.000
1.0111	0.022	0.023	0.019	0.000
1.0889	0.022	0.025	0.020	0.000
1.1667	0.022	0.026	0.020	0.000
1.2444	0.022	0.028	0.021	0.000
1.3222	0.022	0.030	0.022	0.000
1.4000	0.022	0.032	0.022	0.000
1.4778	0.022	0.033	0.023	0.000
1.5556	0.022	0.035	0.023	0.000
1.6333	0.022	0.037	0.024	0.000
1.7111	0.022	0.039	0.025	0.000
1.7889	0.022	0.041	0.025	0.000
1.8667	0.022	0.042	0.026	0.000
1.9444	0.022	0.044	0.026	0.000
2.0222	0.022	0.046	0.027	0.000
2.1000	0.022	0.048	0.027	0.000
2.1778	0.022	0.050	0.028	0.000
2.2556	0.022	0.051	0.028	0.000
2.3333	0.022	0.053	0.029	0.000
2.4111	0.022	0.055	0.029	0.000
2.4889	0.022	0.057	0.030	0.000
2.5667	0.022	0.058	0.030	0.000
2.6444	0.022	0.060	0.031	0.000
2.7222	0.022	0.062	0.031	0.000
2.8000	0.022	0.064	0.032	0.000
2.8778	0.022	0.066	0.032	0.000

2.9556	0.022	0.067	0.032	0.000
3.0333	0.022	0.069	0.033	0.000
3.1111	0.022	0.071	0.033	0.000
3.1889	0.022	0.073	0.034	0.000
3.2667	0.022	0.075	0.034	0.000
3.3444	0.022	0.076	0.035	0.000
3.4222	0.022	0.078	0.035	0.000
3.5000	0.022	0.080	0.035	0.000
3.5778	0.022	0.082	0.036	0.000
3.6556	0.022	0.083	0.036	0.000
3.7333	0.022	0.085	0.037	0.000
3.8111	0.022	0.087	0.037	0.000
3.8889	0.022	0.089	0.037	0.000
3.9667	0.022	0.091	0.038	0.000
4.0444	0.022	0.092	0.038	0.000
4.1222	0.022	0.094	0.038	0.000
4.2000	0.022	0.096	0.039	0.000
4.2778	0.022	0.098	0.039	0.000
4.3556	0.022	0.099	0.040	0.000
4.4333	0.022	0.101	0.040	0.000
4.5111	0.022	0.103	0.044	0.000
4.5889	0.022	0.105	0.052	0.000
4.6667	0.022	0.107	0.057	0.000
4.7444	0.022	0.108	0.061	0.000
4.8222	0.022	0.110	0.064	0.000
4.9000	0.022	0.112	0.067	0.000
4.9778	0.022	0.114	0.069	0.000
5.0556	0.022	0.116	0.072	0.000
5.1333	0.022	0.117	0.074	0.000
5.2111	0.022	0.119	0.076	0.000
5.2889	0.022	0.121	0.078	0.000
5.3667	0.022	0.123	0.080	0.000
5.4444	0.022	0.124	0.082	0.000
5.5222	0.022	0.126	0.086	0.000
5.6000	0.022	0.128	0.091	0.000
5.6778	0.022	0.130	0.094	0.000
5.7556	0.022	0.132	0.097	0.000
5.8333	0.022	0.133	0.100	0.000
5.9111	0.022	0.135	0.103	0.000
5.9889	0.022	0.137	0.105	0.000
6.0667	0.022	0.139	0.290	0.000
6.1444	0.022	0.141	0.682	0.000
6.2222	0.022	0.142	1.158	0.000
6.3000	0.022	0.144	1.624	0.000
6.3778	0.022	0.146	1.995	0.000
6.4556	0.022	0.148	2.232	0.000
6.5333	0.022	0.149	2.420	0.000
6.6111	0.022	0.151	2.584	0.000
6.6889	0.022	0.153	2.738	0.000
6.7667	0.022	0.155	2.884	0.000
6.8444	0.022	0.157	3.022	0.000
6.9222	0.022	0.158	3.154	0.000
7.0000	0.022	0.160	3.281	0.000
7.0778	0.022	0.162	3.403	0.000
7.1556	0.000	0.000	3.520	0.000

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 0.814
Total Impervious Area: 0.137

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0.548
Total Impervious Area: 0.403

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	Flow(cfs)
2 year	0.071154
5 year	0.097448
10 year	0.116458
25 year	0.142351
50 year	0.163038
100 year	0.184951

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	0.033149
5 year	0.049821
10 year	0.063602
25 year	0.084576
50 year	0.10309
100 year	0.124352

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1949	0.103	0.028
1950	0.100	0.032
1951	0.081	0.078
1952	0.050	0.024
1953	0.043	0.025
1954	0.059	0.030
1955	0.067	0.035
1956	0.064	0.033
1957	0.081	0.031
1958	0.053	0.030

1959	0.046	0.027
1960	0.085	0.067
1961	0.066	0.030
1962	0.043	0.022
1963	0.063	0.029
1964	0.057	0.029
1965	0.077	0.030
1966	0.052	0.025
1967	0.102	0.033
1968	0.082	0.026
1969	0.064	0.028
1970	0.067	0.028
1971	0.074	0.031
1972	0.092	0.039
1973	0.047	0.027
1974	0.070	0.028
1975	0.088	0.034
1976	0.064	0.031
1977	0.047	0.021
1978	0.061	0.030
1979	0.076	0.023
1980	0.117	0.039
1981	0.065	0.025
1982	0.117	0.066
1983	0.067	0.033
1984	0.052	0.024
1985	0.062	0.027
1986	0.082	0.040
1987	0.081	0.057
1988	0.044	0.026
1989	0.055	0.022
1990	0.200	0.072
1991	0.135	0.072
1992	0.056	0.027
1993	0.041	0.028
1994	0.037	0.019
1995	0.059	0.033
1996	0.112	0.078
1997	0.085	0.073
1998	0.057	0.027
1999	0.131	0.039
2000	0.070	0.030
2001	0.059	0.021
2002	0.088	0.050
2003	0.086	0.024
2004	0.117	0.105
2005	0.074	0.032
2006	0.070	0.031
2007	0.168	0.098
2008	0.141	0.169
2009	0.094	0.038

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.1997	0.1686
2	0.1679	0.1047
3	0.1412	0.0983

4	0.1350	0.0782
5	0.1311	0.0776
6	0.1175	0.0731
7	0.1169	0.0723
8	0.1165	0.0717
9	0.1115	0.0669
10	0.1032	0.0658
11	0.1023	0.0569
12	0.0998	0.0496
13	0.0942	0.0401
14	0.0919	0.0395
15	0.0884	0.0392
16	0.0876	0.0388
17	0.0863	0.0384
18	0.0850	0.0346
19	0.0847	0.0337
20	0.0825	0.0333
21	0.0819	0.0333
22	0.0813	0.0333
23	0.0812	0.0325
24	0.0810	0.0324
25	0.0773	0.0324
26	0.0764	0.0314
27	0.0738	0.0312
28	0.0737	0.0307
29	0.0703	0.0305
30	0.0699	0.0303
31	0.0697	0.0301
32	0.0672	0.0298
33	0.0671	0.0298
34	0.0666	0.0297
35	0.0662	0.0297
36	0.0654	0.0292
37	0.0642	0.0289
38	0.0642	0.0284
39	0.0638	0.0284
40	0.0627	0.0281
41	0.0616	0.0278
42	0.0606	0.0277
43	0.0592	0.0274
44	0.0592	0.0273
45	0.0592	0.0271
46	0.0574	0.0271
47	0.0573	0.0267
48	0.0565	0.0264
49	0.0553	0.0257
50	0.0529	0.0254
51	0.0521	0.0252
52	0.0516	0.0251
53	0.0500	0.0244
54	0.0475	0.0240
55	0.0475	0.0235
56	0.0461	0.0227
57	0.0442	0.0224
58	0.0432	0.0216
59	0.0426	0.0213
60	0.0414	0.0208
61	0.0369	0.0192

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0356	3523	3172	90	Pass
0.0369	3144	2554	81	Pass
0.0382	2819	1960	69	Pass
0.0394	2532	1321	52	Pass
0.0407	2295	937	40	Pass
0.0420	2062	885	42	Pass
0.0433	1858	830	44	Pass
0.0446	1655	785	47	Pass
0.0459	1493	751	50	Pass
0.0472	1357	732	53	Pass
0.0485	1232	706	57	Pass
0.0497	1109	683	61	Pass
0.0510	1021	661	64	Pass
0.0523	919	641	69	Pass
0.0536	834	615	73	Pass
0.0549	771	590	76	Pass
0.0562	703	562	79	Pass
0.0575	627	529	84	Pass
0.0588	556	501	90	Pass
0.0600	507	473	93	Pass
0.0613	467	442	94	Pass
0.0626	428	412	96	Pass
0.0639	385	382	99	Pass
0.0652	349	343	98	Pass
0.0665	319	305	95	Pass
0.0678	286	280	97	Pass
0.0691	263	253	96	Pass
0.0703	243	227	93	Pass
0.0716	218	202	92	Pass
0.0729	206	177	85	Pass
0.0742	190	161	84	Pass
0.0755	181	145	80	Pass
0.0768	162	131	80	Pass
0.0781	151	114	75	Pass
0.0794	140	101	72	Pass
0.0806	133	97	72	Pass
0.0819	117	91	77	Pass
0.0832	108	85	78	Pass
0.0845	101	82	81	Pass
0.0858	92	79	85	Pass
0.0871	85	76	89	Pass
0.0884	81	71	87	Pass
0.0897	74	69	93	Pass
0.0909	73	65	89	Pass
0.0922	69	60	86	Pass
0.0935	59	57	96	Pass
0.0948	56	51	91	Pass
0.0961	52	45	86	Pass
0.0974	48	38	79	Pass
0.0987	46	29	63	Pass
0.1000	44	24	54	Pass
0.1012	41	22	53	Pass
0.1025	36	16	44	Pass

0.1038	34	11	32	Pass
0.1051	31	5	16	Pass
0.1064	31	5	16	Pass
0.1077	29	5	17	Pass
0.1090	28	5	17	Pass
0.1103	27	5	18	Pass
0.1115	23	5	21	Pass
0.1128	20	5	25	Pass
0.1141	20	4	20	Pass
0.1154	19	4	21	Pass
0.1167	17	4	23	Pass
0.1180	15	4	26	Pass
0.1193	14	4	28	Pass
0.1206	13	4	30	Pass
0.1218	13	4	30	Pass
0.1231	13	4	30	Pass
0.1244	12	4	33	Pass
0.1257	11	4	36	Pass
0.1270	11	4	36	Pass
0.1283	11	3	27	Pass
0.1296	10	3	30	Pass
0.1309	10	3	30	Pass
0.1321	8	3	37	Pass
0.1334	7	3	42	Pass
0.1347	7	3	42	Pass
0.1360	6	3	50	Pass
0.1373	6	3	50	Pass
0.1386	6	3	50	Pass
0.1399	5	3	60	Pass
0.1412	5	3	60	Pass
0.1424	4	3	75	Pass
0.1437	4	2	50	Pass
0.1450	4	1	25	Pass
0.1463	4	1	25	Pass
0.1476	4	1	25	Pass
0.1489	4	1	25	Pass
0.1502	3	1	33	Pass
0.1515	2	1	50	Pass
0.1527	2	1	50	Pass
0.1540	2	1	50	Pass
0.1553	2	1	50	Pass
0.1566	2	1	50	Pass
0.1579	2	1	50	Pass
0.1592	2	1	50	Pass
0.1605	2	1	50	Pass
0.1618	2	1	50	Pass
0.1630	2	1	50	Pass

Water Quality

Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0 acre-feet
On-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.
Off-line facility target flow:	0 cfs.
Adjusted for 15 min:	0 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Total Volume Infiltrated		0.00	0.00	0.00		0.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Disclaimer

Legal Notice

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References

A pre-application conference held with city staff under PRE22-028 and the following pages include summary of city staff notes for easy reference.

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercerisland.gov

Pre-Application Meeting (PRE22-028)

An Intake Screening is required in addition to a Pre-Application Meeting. A Pre-Application Meeting does not replace the required Intake Screening. This meeting is to provide guidance and information include prior to formal submittal.

Summary:

Site Location:	**4833 90th Ave SE**	**Parcel Number**	435130-0487
Lot Size:	41,165 square feet	**Zoning:**	R-8.4 (Single Family)
Brief Project Description:	A proposal for a 4-lot short subdivision.	**Documents Provided:**	1. Pre-Application Meeting Request Form 2. Project Narrative and List of Questions 3. Civil Plans 4. Geotechnical Report 5. Arborist Report 6. Tree Inventory & Replacement Submittal Information 7. Tree Submittal Checklist

Applicant Information:		
Name: Mazen Haidar	**Email:** mazen@pacificlandwa.com	**Phone:** 425-615-6160
Second Pre-application Meeting Required: Recommended	It is recommended to meet with the city again to discuss tree impacts with a redesigned subdivision proposal.	

Applicant Questions:

1. Is proposing a 20-foot-wide access easement instead of an access tract acceptable?

   Staff Response: The proposed access easement must be large enough to accommodate the access road. MICC 19.08.030(F)(1) requires subdivisions abutting an arterial to provide internal access to the subdivision's lots. MICC 19.09.100(A) requires that a subdivision use common access drives where feasible. Therefore, a single access road must be used to access all four lots. Under MICC 19.09.040(B) a private road serving three or more lots shall be at least 20 feet in width. An access easement that is 20 feet in width is acceptable to accommodate a 20-foot-wide access road.

2. Can the area for the proposed 20-foot-wide access easement be included in each adjacent lot area to meet minimum lot area requirements per MICC 19.02.020?

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Staff Response: The lot area requirements MICC 19.02.020 require that the net lot area of each lot be greater than 8400 square feet. Net lot area is the area contains within the established boundaries of a lot, less any area used for public or private vehicular access easement, excluding that portion of the easement used for a driveway access to the encumbered lot. This means that the portion of the easement that is used to access the lot would be included in the net lot area. The rest of the easement would be excluded from the net lot area.

3. Is the proposed 16-foot paved common access driveway acceptable to serve two lots?

   Staff Response: MICC 19.08.030(F)(1) requires subdivisions abutting an arterial to provide internal access to the subdivision's lots. MICC 19.09.100(A) requires that a subdivision use common access drives where feasible. Therefore, a single access road must be used to access all four lots. Under MICC 19.09.040(B) a private road serving three or more lots shall be at least 20 feet in width.

4. Are the proposed building setback lines shown on the Civil Plans acceptable and consistent with MICC 19.02.020?

   Staff Response: The location of the required setbacks is consistent with the setback requirements listed in MICC 19.02.020(C)(2), as well as the setback requirements for new lots abutting an arterial set forth in MICC 19.08.030(F)(1). MICC 19.02.020(C)(1)(c)(i)((b)) states that for lots with a lot width of more than 90 feet, the sum of the side yards' width shall be a width that is equal to at least 17% of the lot width. The plans show that the widths of the lots vary between 100 and 103.75 feet. This would mean that the side yards would need to add up to 17 to 17.63 feet.

   Please also note that building pads consistent with MICC 19.09.090 will need to be established for each lot of the subdivision. In particular, building pads will need to be located to minimize or prevent the removal of trees and vegetation required for retention pursuant to chapter 19.10 MICC.

5. Are all proposed lot area and dimensions shown on the Civil Plans acceptable and consistent with MICC 19.02.020?

   Staff Response: The lots shown in the plans meet the lot area and lot dimension requirements listed in MICC 19.02.020(A).

6. Assuming the common driveway to the proposed two rear lots must be set aside in an access tract instead of an access easement, what is the minimum required width of the tract?

   Staff Response: The tract would need to be wide enough to accommodate the access road. MICC 19.08.030(F)(1) requires subdivisions abutting an arterial to provide internal access to the subdivision's lots. MICC 19.09.100(A) requires that a subdivision use common access drives where feasible. Therefore, a single access road must be used to access all four lots. Under MICC 19.09.040(B) a private road serving three or more lots shall be at least 20 feet in width. An access easement that is 20 feet in width is acceptable to accommodate a 20-foot-wide access road.

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7. Should the area of the access tract be deducted from the overall parcel area when calculating minimum lot areas?

   Staff Response: An access tract would be considered a separate parcel from the lots of the subdivision. Its area could not be included in the area of the other lots.

8. Are there any setback requirements from existing slopes across the subject parcel's western property line that exceed 20% but are not steep slopes?

   Staff Response: Setbacks are not required from geologically hazardous areas, including landslide hazard areas and steep slopes. However, a critical area review 1 is required for any alteration of a geologically hazardous area, which involves preparing a geotechnical report which will be reviewed by the city. Please see Section 3 of the Planning Comments below for more information.

9. Will the city require road improvements, including curbs, gutters, and sidewalks, along either 90th Ave SE or Island Crest Way across the frontage of the subject parcel?

   Staff Response: The city will not require urban frontage road improvements such as curbs, gutters, and sidewalks along the frontage of 90th Ave SE. Any impacts to the right-of-way along Island Crest Way will need to be restored.

10. With the city require 90th Ave SE to be widened across the frontage of the subject parcel?

    Staff Response: The city will not require any road widening along the frontage of 90th Ave SE. However, the city might require a full grinding and overlay of the roadway pavement depending on the numbers of the utility cuts and damages to the city roadway due to the construction activities. The limits and extents of the roadway restoration will be determined towards the end of the construction.

11. Will the city require any right-of-way dedication along either 90th Ave SE or Island Crest Way?

    Staff Response: The city will not require any right-of-way dedication for 90th Ave SE or Island Crest Way.

12. Will this proposal have diversion issues based on the information provided in the narrative?

    Staff Response: There is no diversion issue based on the city drainage map.

13. Will this proposal be exempt from providing Retention/Detention (R/D) flow control facilities provided the conditions for this exemption are met pursuant to Section I-2.5.7 of the 2012 Western Washington Stormwater Management Manual as amended in 2014 and pursuant to MICC 15.09.050?

    Staff Response: The flow control system (MR#7) is not exempted if the project exceeds the thresholds for the flow control (10,000 square feet or more effective impervious surface,

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convert .75 acres or more of vegetation, etc.). The downstream of the site is comprised of natural watercourses that are not manmade conveyance elements. This project does not meet the criteria of an exemption.

If MR#7 is required for this project, then the onsite detention system listed in MICC 15.09.050 will not be required. If MR#7 is not required (such as less than 10,000 square feet effective impervious surface, conversion of less than .75 acres of vegetation area, etc.), then you will need to evaluate if all the on-site stormwater management BMPs included on List #1 and List #2 are feasible for roofs and/or other hard surfaces. If it is not feasible, then an on-site detention system from the site will be required due to the downstream system, including watercourses.

14. Can you please provide a copy of the city's standard on-site detention sizing table?

    Staff Response: Please follow this link for the sizing table: On-Site Detention Design Requirements.

15. We would like to include and enter all the existing square footage and ground coverage (including the existing impervious surface and lawn surface) within the subject site when calculating surface flow volume in the subject site conditions for the purpose of sizing detention and retention facilities. Is this approach acceptable to the city?

    Staff Response: Yes. This approach is acceptable to the City.

16. Is the proposed subdivision exempt from providing surface water quality control and treatment facilities since the proposal will create less than 5000 square feet of New Pollution Generating Impervious Surfaces (NPGIS)?

    Staff Response: If the NPGIS area is less than 5000 square feet, the MR#9 is not required.

17. Does the proponent have the option to pay a fee in lieu instead of constructing detention flow control facilities pursuant to MICC 15.11.020? If so, how are they calculated?

    Staff Response: This site is not eligible for fee in lieu of a detention system.

18. Will an on-site fire turnaround be required for this short subdivision?

    Staff Response: Fire access roads, private access roads, and driveways in excess of 150 feet shall beave provisions for fire apparatus turnaround as listed and illustrated in Appendix D of the IFC.

Review Comments:

Fire Comments:

Fire Contact: Jeromy.Hicks@mercerisland.gov or 206-275-7966.

1. Basic notes regarding the Fire Review and evaluation processes have been provided below. There are several hyperlinks that may be used to help guide you through this process. All this

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information is consolidated in the city's Developer Manual (Please remember that this is a guide and all information shall be verified with state and local adopted code).

2. Fire Access
    a. Access roads (defined under IFC 202) under 500 feet in length are required to be 20 feet in width. Access roads over 500 feet in width are required to be 26 feet in width. (IFC 503.2.1, D103.1, MICC 17.07.020)
        i. 90th Ave SE is over 500 feet long, but only 20 feet wide. This will result in a deficiency in any home built on 90th Ave SE.
        ii. It is recommended that the access for the 4 lots be widened to 20 feet for the first two easterly properties. Access roads shall be 20 feet wide within 150 feet of the furthest corner of the residence. This would require the plat to have 20-foot roadways to the two easterly properties.
    b. Minimum driveway widths for planning purposes are outlined in MICC 19.09.040.
        i. All driveways under 150 feet in length from the furthest corner shall conform to this standard. In this situation, the furthest corner would be located on the two west properties.
        ii. Please see Section 5 of the Planning Comments below.
    c. Grade shall not exceed 10%. Grades over 10% but under 20% (maximum) may be evaluated for code alternative requests. (IFC 503.2.7)
    d. Length shall not exceed 150 feet from the furthest portion of the building as one would walk. (IFC 503.2.1)
    e. The surface of the access road shall be able to withstand an imposed load of 75,000 pounds and be constructed of asphalt. If the grade exceeds 15%, the surface shall be brushed concrete. (IFC D102.1, MICC 19.09.040)
    f. Fire access roads, private access roads, and driveways in excess of 150 feet shall have provisions for fire apparatus turnaround as listed and illustrated in Appendix D of the IFC.
3. Fire Flow (Hydrants)
    a. A hydrant capable of flowing the required fire flow as outlined in the International Fire Code, Appendix B shall be located within 300 feet of the furthest portion of the building, or 600 feet for a building with an approved sprinkler system.
    b. Nearest hydrant to furthest Northwest property stats:
        i. F4-10
        ii. 1602gpm at 58 psi
            1. IFC Fire Flow Requirements
        iii. Distance to furthest point of northwest home: 295 feet
        iv. Distance to access: 145 to northwest driveway
4. Sprinklers
    a. All new construction and alterations over 50% valuation are required to install a minimum of a NFPA 13d fire sprinkler system.
    b. Decreased fire flow, access, grade, or building size may require the installation of a NFPA 13r or 13 sprinkler system.
    c. Water meter sizing is required for the installation of a fire sprinkler system.
5. Fire Alarm Systems
    a. NFPA 72 Monitored Fire Alarm systems may be required as part of mitigation for deficiencies as listed above or may be proposed as a code alternative.
6. Fire code alternatives

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a. Fire code alternatives may be considered upon application of a building permit. The building designer must propose such alternative, which must show how the alternative is equal to or above the required code.
b. Fire code alternatives are not considered as a replacement for the fire code. The individual building applicant must show that the adopted prescriptive code may not be followed as a result of extenuating circumstances.

7. Plat Map Wording Requirement: The following statement must be shown on all plat map submittals:

   "All buildings are subject to meeting the current fire code requirements at the time of permit submittal. Access shall be provided as outlined in the International Fire Code Appendix D as adopted and/or amended and MICC 19.09.040. Fire plan reviews will be conducted at the time of building permit submittal and may require additional fire protection systems and/or fire prevention measures for permit approval."

For additional information please refer to this helpful webpage:
https://www.mercerisland.gov/cpd/page/fire-permits-and-prevention-information

Tree Comments:

Tree Contact: John.Kenney@mercerisland.gov or 206-275-7713.

1. Please refer to MICC 19.10 for our tree code.
2. 30% of trees with a diameter of 10 inches or greater is required; additionally, development must be designed to minimize tree removal. Since this is currently considered one lot, use one tree inventory worksheet to calculate this. The project will not be approved unless you meet this requirement.
3. Replacement is required for any trees that are removed, according to the replacement ratios in MICC 19.10.070.
4. Tree protection (typically at tree dripline) of retained trees will be required.
5. Sequential (phased) tree removal may be required (only remove trees necessary at each step of the review process).
6. Several exceptional trees are onsite and must be retained and protected unless justified under MICC19.10.060(A)(3).

For additional information please refer to this helpful webpage:
https://www.mercerisland.gov/cpd/page/tree-permits

Civil Engineering Comments:

Civil Contact: Ruji.Ding@mercerisland.gov or 206-275-7703.

1. Please see above for responses to the provided questions.
2. The existing ditch will be required to be piped along the frontage of the site as a part of this project.
3. Please refer to MICC Title 15 for our Water, Sewers, and Public Utilities code.

For more information on Stormwater Permits please visit here:
https://www.mercerisland.gov/cpd/page/stormwater-permits

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Planning Comments:

Planning Contact: andrew.leon@mercerisland.gov or 206-275-7720.

1. Residential Zoning Standards:
    a. Yards
        i. Front yard: 20 feet
        ii. Rear yard: 25 feet
        iii. Side yards:
            1. Total side yards must be at least 17% of the lot width; no side yard less than 33% of the total side yard requirement.
            2. Variable Side Yard Depth Requirement:
                a. Variable Side Yard Depth Requirements apply to interior lot lines only.
                b. A minimum side yard of 7.5 feet is required for 1) nongabled roof ends where the height is more than 15 feet; or 2) gabled roof ends more than 18 feet. Both measurements are taken from existing or finished grade, whichever is lower, to the top of the gabled roof end adjoining the side yard.
                c. A minimum side yard of 10 feet is required for single-family dwellings with a height of more than 25 feet measured from the existing or finished grade, whichever is lower, to the top of the exterior wall facade adjoining the side yard.
        iv. Eaves may only protrude up to 18 inches into yards; note that no protrusion is allowed within *minimum* side yard setbacks.
        v. No eave and minor building element protrusion is allowed into the minimum side yard setback established by either the requirements based on lot width or Variable Side Yard Depth Requirement. (MICC 19.02.020(C)(3)).
    b. Lot Coverage:
        i. Calculated by totaling the following:
            1. All drivable surfaces (driveway, parking pad, turn-arounds, etc. regardless the material type; e.g. pervious driveway counts towards lot coverage)
            2. Roof line (includes eaves and covered decks)
        ii. Lot Coverage is limited to a percentage of net lot area; this percentage varies between 20-40% depending on the slope of the lot. Lot slope is calculated by subtracting the lowest existing elevation from the highest existing elevation and dividing the resulting number by the shortest horizontal distance between these two points.
        iii. Allowed a maximum of 9% of the lot area can be hardscape
            1. Hardscape includes: patios, uncovered steps, walkways, decks, retaining walls, rockeries, and other hardened surfaces other than drivable surfaces or roofs.
            2. Hardscape improvements can be within the maximum lot coverage allowance. That is, if the proposed lot coverage is less than the maximum lot coverage, the difference between the maximum and proposed areas can be used for hardscape.
2. Subdivisions
    a. Design Standards
        i. Streets, roads, and rights-of-way.
            1. The width and location of rights-of-way for major, secondary, and collector arterial streets shall be as set forth in the comprehensive arterial plan.
            2. Public rights-of-way shall comply with the requirements set out in MICC 19.09.030.
            3. Private access roads shall meet the criteria set out in MICC 19.09.040.

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a. See Section 5 of the Planning Comments below for more information about standards for private access roads.

4. Street of the proposed subdivision shall connect with existing improved public streets, or with existing improved private access roads subject to easements of way in favor of the land to be subdivided.

ii. Residential lots.

1. The area, width, and depth of each residential lot shall conform to the requirements for the zone in which the lot is located. Any lot which is located in two or more zones shall conform to the zoning requirements determined by the criteria set out in MICC 19.01.040(G)(2).
2. Each side line of a lot shall be approximately perpendicular or radial to the center line of the street on which the lot fronts.
3. Th proposed subdivision shall identify the location of building pads for each proposed lot per MICC 19.09.090. No cross-section dimension of a designated building pad shall be less than 20 feet in width.
4. The proposed subdivision shall incorporate the preferred development practices pursuant to MICC 19.01.110 where feasible.
5. The proposed subdivision shall be designed to comply with the provisions of Chapter 19.10 MICC.

iii. Design standards for special conditions.

1. Subdivisions abutting an arterial street as shown on the comprehensive arterial plan shall be oriented to require the rear or side portion of the lots to abut the arterial and provide for internal access streets.
    a. Island Crest Way is an arterial street as shown on the comprehensive arterial plan. The following design standards are required:
        i. The new lots abutting Island Crest Way shall be oriented so either the side or rear yards abut Island Crest Way.
        ii. All four lots of the subdivision must use a common internal access street.
2. Where critical areas meeting the criteria set out in Chapter 19.07 MICC are present within the subdivision, the code official or city council may:
    a. Require that certain portions of the long subdivision or short subdivision remain undeveloped with such restrictions shown on the official documents.
    b. Increase the usual building setback requirements.
    c. Require appropriate building techniques to reduce the impact of site development.

b. Streets, utilities, and storm drainage. A subdivision shall include provisions for streets, water, sanitary sewers, storm drainage, utilities and any easements or facilities necessary to provide these services. All utilities shall be placed underground unless waived by the city engineer. Detailed plans for these provisions shall not be required until after the approval of the preliminary plat and shall be a condition precedent to the official approval of the subdivision.

c. Construction Limitations

i. No construction, tree removal, grading, installation of utilities on land within a proposed long or short subdivision shall be allowed prior to preliminary approval of the long or short subdivision and until the applicant has secured the permits required under the MICC. Following preliminary approval, tree removal, grading, and

installation of utilities shall be the minimum necessary for final plat approval of the long or short subdivision.

ii. An existing lot, created through the final plat approval of a long or short subdivision, shall be a condition precedent for determination of complete application for a building permit to construct a new single-family dwelling.

1. In other words, only one building permit application for a new single-family dwelling could be accepted and reviewed by the city prior to the recording of the final plat.

3. Critical area constraints

a. The City of Mercer Island GIS shows that there are landslide hazard areas and erosion hazard areas on the western portion of the subject lot.

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 MICC 19.07.120, or a critical area review 1 approval has been obtained.

i. When an 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 design and development measures to mitigate such hazards. The code official may waive the requirement for a critical area study and the requirements of MICC 19.07.160(B)(2) and (3) 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.

ii. 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:

1. Will not adversely impact other critical areas;
2. Will not adversely impact the subject property or adjacent properties;
3. Will mitigate impacts to the geologically hazardous area consistent with best available science to the maximum extent reasonably possible such that the site is determined to be safe; and
4. Includes the landscaping of all disturbed areas outside of building footprints and installation of hardscape prior to final inspection.

iii. Alteration of landslide hazard areas, seismic hazard areas and associated buffers may occur if the conditions listed in MICC 19.07.160(B)(2) are satisfied and the geotechnical professional provides a statement of risk matching one of the following:

1. An evaluation of site-specific subsurface conditions demonstrates that the proposed development is not located in a landslide hazard area or seismic hazard area;
2. The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;
3. 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
4. The development is so minor as not to pose a threat to the public health, safety and welfare.

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c. Development standards – Landslide hazard areas. Development is allowed within landslide hazard areas and associated buffers, when the following standards are met:
    i. A critical area study shall be required for any alteration of a landslide hazard area or associated buffer.
    ii. Buffers shall be applied as follows. When more than one condition applies to a site, the largest buffer shall be applied:
        1. 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.
        2. Shallow landslide hazard areas shall have minimum 25-foot buffers applied in all directions.
        3. Deep-seated landslide hazard areas shall have 75-foot buffers applied in all directions.
d. Development standards – Erosion hazard areas.
    i. All development proposals shall demonstrate compliance with Chapter 15.09 MICC, storm water management program.
    ii. No development or activity within an erosion hazard area may create a net increase in geological instability on or off site.

4. State Environmental Policy Act (SEPA) Review
    a. This proposal is exempt from SEPA under WAC 197-11-800(6)(d) as it involves a short subdivision for which the resulting lots do not exceed the total lots allowed under RCW 58.17.020 (four or fewer lots).
5. Private access roads and driveways.
    a. All private access roads serving three or more single-family dwellings shall be at least 20 feet in width.
    b. All corners shall have a minimum inside turning radius of 28 feet.
    c. All private access roads in excess of 150 feet in length, measured along the centerline of the access road from the edge of city street to the end of the access road, shall have a turnaround with an inside turning radius of 28 feet.
    d. Gradient
        i. No access road shall have a gradient of greater than 20%.
        ii. For all access roads and driveways with a gradient exceeding 15%, the road surface shall be cement concrete pavement with a brushed surface for traction. Access roads and driveways with gradients of 15%or less may have asphalt concrete surface.
6. Building pads
    a. New subdivisions shall designate a building pad for each lot as follows:
        i. The building pad shall be located to minimize or prevent impact as indicated in the following:
            1. Removal of trees and vegetation required for retention pursuant to Chapter 19.10 MICC shall be prevented.
            2. Disturbance of the existing, natural topography as a result of anticipated development within the building pad shall be minimized.
            3. Impacts to critical areas and critical area buffers shall be minimized, consistent with the provisions of Chapter 19.07 MICC.
            4. Access to the building pad shall be consistent with the standards contained in MICC 19.09.040.
        ii. Building pads shall not be located within:
            1. Required front, rear, or side yard setbacks.

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2. Streets or rights-of-way.
3. Critical areas, buffers or critical area setbacks; provided building pads may be located within geohazard areas and associated buffers and setbacks when all of the following are met:
    a. A qualified professional determines that the criteria of MICC 19.07.160(B)(2) and (3), Site development, are satisfied.
    b. Building pads are sited to minimize impacts to the extent feasible.
    c. Building pads are not located in steep slopes or within 10 feet from the top of a steep slope, unless such sloped, as determined by a qualified professional, consist of soil types determined not to be landslide prone.

iii. No cross-section dimension of a building pad shall be less than 20 feet in width.

b. New buildings shall be located within the building pad established by MICC 19.09.090(A) or (B). Legally established nonconforming portions of existing buildings and additions made pursuant to MICC 19.07.130, Modifications, may be located outside of building pads.

7. Preferred practices – Proposed developments shall incorporate all of the following preferred development practices where feasible:
    a. Use common access drive and utility corridors.
    b. Development, including roads, walkways and parking areas, in critical areas should be avoided, or if not avoided, adverse impacts to critical areas will be mitigated to the greatest extent reasonably feasible.
    c. Retaining walls should be designed to minimize grading, including the placement of fill, on or near an existing natural slope.
8. Easement:
    a. Vehicular Access Easements. No structures shall be constructed on or over any vehicular access easement. A minimum five-foot yard setback from the edge of any easement that affords or could afford vehicular access to a property is required for all structures; provided, that improvements such as gates, fences, rockeries, retaining walls and landscaping may be installed within the five-foot yard setback so long as such improvements do not interfere with emergency vehicle access or sight distance for vehicles and pedestrians.
    b. Utility and Other Easements. No structure shall be constructed on or over any easement for water, sewer, storm drainage, utilities, trail or other public purposes unless it is permitted within the language of the easement or is mutually agreed in writing between the grantee and grantor of the easement.
9. Impact fees
    a. Future construction on the new lots resulting from the proposed subdivision will need to pay transportation and park impact fees.
    b. Current rates are:
        i. Transportation – $2,600.31
        ii. Parks – $4,914.53
    c. Note that fees are due at the time they are assessed--they do not vest to the time of complete subdivision or building permit application.
10. Transportation Concurrency: Please apply for a transportation concurrency certificate at the same time as the subdivision.
11. Vesting: Please see the standards in MICC 19.15.170.
12. Application fees
    a. Deposit due at time of application

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b. Review time is billed hourly against the deposit; additional fees may be requested if additional review time is required.
c. When third-party technical review is required (e.g. geotechnical, wetland, watercourse etc.), this is billed separately, in addition to staff review time.

13. Land Use Application Process and Estimated Timeline:
    a. Required land use approvals
        i. Short Subdivision
    b. Prompt for consolidated review
    c. Summary of procedural steps
        i. Pre-Application meeting
        ii. Submit application electronically
        iii. Application Completeness Check
        iv. Notice of Application (incl. public notice via sign on site, mailing, notice in bulletin) beginning 30-day comment period; review begins
        v. Review comments may be sent out if needed
        vi. Notice of Decision
        vii. Appeal period
        viii. Final Plat review and recording
    d. A final plat application meeting all requirements of Chapter 19.15 MICC shall be submitted to the code official and recorded within five years of the date of preliminary plat approval.

Land Use Decisions

Type of Review	Target
Completeness Review	4 weeks
First review	8-12 weeks
Second and subsequent reviews	6 weeks
Staff Report / Decision (following completion of review)	3-4 weeks

Single Family Residential	
First Review	8-12 weeks
Second Review	3 weeks
Third and subsequent reviews	2 weeks
Revisions	2-3 weeks
Express Reviews (see note below)**	4 weeks

For more information on Land Use and Planning please refer to this useful webpage:
https://www.mercerisland.gov/cpd/page/land-use-application-forms-and-submittal-requirements

Regards

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Andrew Leon
Planner
Community Planning & Development
City of Mercer Island

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Special Reports

Geotechnical Report and addendum prepared for by GEO Group Northwest, Inc. dated February 18th, 2022 and September 16th, 2022 are included in the following pages. Similarly Tree Assessment Report prepared by Arbor INFO LLC dated April 20th, 2022 is included in the following pages.

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists
& Environmental Specialists

February 18th, 2022 G-5514

Mr. Jesse Tam
Phone: (206) 948-9902
Email: jesset28@aol.com

Subject: **Geotechnical Engineering Investigation & Soil Infiltration Evaluation**
Proposed Short-Plat
4833 – 90th Ave SE
Mercer Island, Washington

Dear Mr. Tam:

At your request, GEO Group Northwest, Inc., conducted a geotechnical engineering investigation and soil infiltration evaluation for the proposed short-plat at the above-subject location in Mercer Island, Washington**.** The scope of our services included review of the area geologic map; assessment of subsurface soil and groundwater conditions; pilot infiltration testing; and preparation of this report of our findings, conclusions, and recommendations.

SITE CONDITIONS

Site Description

The project site is located in Mercer Island, Washington, as illustrated in *Plate 1 – Site Location Map*. The site is rectangularly shaped and consists of approximately 41,110 square feet (0.94 acres). The existing residence is located in the central region of the property. In general, the site features level topography, however, when nearing the west property line, the site begins to slope westerly at low to moderate inclinations down to Island Crest Way below. The majority of this moderately-inclined slope area is west of the property line in the City right-of-way. The existing site configuration and topography are illustrated in *Plate 2 – Site Plan,* and *Plate 3 – Site Geologic Hazards Map*. The site is bounded by residential developed properties to the north and

south, Island Crest Way to the west, and by 90th Avenue Southeast to the east. A gravel driveway extending from 90th Avenue Southeast enters the property along the east property line.

Proposed Development

At this time, we understand that the existing site is proposed to be divided into four individual lots. In this case, we anticipate that a total of up to four single-family residences will be built on the project site. This report has been prepared to be applicable to construction of typical wood-frame single-family residences having 1 to 3 stories including a basement. We recommend that specific plans for the parcels should be reviewed by the geotechnical engineer, to evaluate whether the conclusions and recommendations in the report remain applicable and supplemental or revised recommendations should be provided where appropriate.

SITE INVESTIGATION

Geologic Overview

According to the area geologic map, the site soils are identified as Vashon subglacial till (Qvt) from the Fraser Glaciation. Glacial till is described as a very compact mixture of sand, silt, clay, and gravel deposited under glacial ice during the Fraser glaciation period. Glacial till typically has a weathered zone of loose to medium dense soil on top, underlain by dense, unweathered till.

Subsurface Investigation

On January 21st, 2022, Garrett Dean, Staff Engineering Geologist from our firm, visited the site to perform a visual reconnaissance of the site and investigate the subsurface soil conditions. In addition to our reconnaissance, we oversaw the excavation of five exploratory test pits throughout the site (TP-1 through TP-5). The boring locations are illustrated on *Plate 2 – Site Plan*.

The soils encountered the test pits typically consisted of a thin surface veneer of organic-rich silty sand topsoil, underlain by medium dense to very dense silty sand with some gravel to the total depth of the test pits which ranged between approximately 3 to 3.5 feet below the ground surface (bgs). A minor amount of fill material was encountered near the surface in test pit TP-1. A small amount of groundwater seepage was encountered at a depth of approximately 2.5 feet in

test pit TP-1. For additional information about the soils encountered, please refer to the test pit logs attached as *Appendix A* to this report.

GEOLOGIC HAZARD AREAS REVIEW

We reviewed available geologic hazard areas information on the City of Mercer Island Information and Geographic Services (IGS) website. The information indicates that the project site is located within erosion and landslide hazard critical areas. According to the IGS information, no known landslides are identified on the project site or immediate adjacent vicinity. The erosion and landslide hazard areas at the site are limited to the moderately-inclined, sloping region at the west margin of the site and are identified in *Plate 3 – Site Geologic Hazards Map*.

Landslide Hazard Area Evaluation

During our investigation, we observed no indications of soil instability or erosion within the hazard area or other areas of the site. No water seepage was observed in test pits TP-3 and TP-4, which were located within or directly adjacent to the mapped landslide hazard area. The slope in the hazard area is approximately 12 to 16 feet in vertical height and per the mapping provided by the City of Mercer Island IGS, is less than 40 percent grade, which excludes the feature's designation as a 'steep slope' status. The slope and hazard area are well-vegetated with native shrubs, trees, and groundcover. No water seepage was observed at the slope's toe or face.

We find the presence of very dense, glacially consolidated soils at shallow depths throughout the project site to be a mitigating factor in regards to the potential for landsliding at the site. Therefore, in our opinion, the risk of landsliding or soil movement at the site can be considered very low based on these observed site conditions.

Erosion Hazard Area Evaluation

During our investigation we did not observe signs of rutting or downslope soil movement at the site or erosion hazard area. We observed the site as a whole, including the moderately-inclined slope region at the west extent of the site, to be well-vegetated with various native shrubs, trees, and groundcover. This vegetated condition is a mitigating factor with regards to soil erosion at the site in our opinion.

Provided that the proper temporary and permanent erosion and sediment controls, provided in this report, are implemented where soils have been disturbed during and post development, it is our opinion that the risk of significant soil erosion at the site can be considered minimal.

SOIL INFILTRATION EVALUATION

Soil Infiltration Testing

Test pit TP-5 was used to perform soil infiltration testing using the small Pilot Infiltration Test procedure described in the December 2014 edition of the Washington Department of Ecology Stormwater Management Manual for Western Washington. The test was performed at a depth of approximately 26 inches below the existing ground surface at the location.

Following the soaking period, the testing consisted of taking water level measurements until one hour of essentially steady water levels were measured. Afterward, the water supply was shut off, and the drop of the water level was measured at regular intervals for a period of 90 minutes. The test data is presented in *Appendix B* to this letter.

Approximately 1.5 inches of water was observed in the test pit at 8:50am the following morning, which was approximately 17 hours after the testing was completed. The test pit was excavated further to check for the presence of a hydraulic restrictive layer. A hydraulically restrictive layer was encountered at approximately 3 feet of depth in TP-5. Based on observations of soil conditions in the other four test pits that were excavated on site (TP-1 through TP-4), the presence of the hydraulically restrictive layer can be assumed to underly the entirety of project site.

Testing Results

At test pit TP-5, a measured infiltration rate of 3.21 in/hr was obtained for the steady flow portion of the testing, and a measured infiltration rate of 0.61 in/hr was obtained for the falling head portion of the testing.

We used the falling head values to calculate design infiltration rates for the test location. We applied a correction factor of 0.28 to account for soil variability, test method used, and long-term maintenance considerations. The resulting design infiltration rate is calculated to be **0.17 in/hr**.

Infiltration Feasibility

In our opinion, infiltration feasibility at the subject location is limited first by the high fines content in the weathered soil horizon and is additionally hindered by the presence of hydraulically restrictive hardpan glacial till which was encountered at relatively shallow depths in the test pits. As mentioned previously in the Subsurface Investigation and Soil Infiltration Testing sections above, hydraulically restrictive glacial till was encountered at depths ranging between 3 to 3.5 feet below the ground surface in the test pits.

CONCLUSIONS AND RECOMMENDATIONS

Soil Infiltration Feasibility Evaluation

The results from our subsurface investigation conclude that the site soils contain a high fraction of fines and are relatively impermeable. In our opinion, infiltration as a stormwater bmp for the site is not feasible. Dispersion in the backyards is not recommended due to potential impacts to the neighboring properties. We recommend that drainage from the proposed development be discharged into the existing stormwater drainage system if available, or otherwise discharged to an approved alternative.

Seismicity Evaluation

In accordance with the 2018 International Building Code, the site classification is Site Class D (stiff soil). Glacially consolidated soils have a high shear strength and the potential for landslides, liquefaction and/or lateral spreading during a strong motion earthquake can be considered negligible. In our opinion, the site is stable and the risk of a surface rupture, resulting from a large magnitude seismic event, is very low. No seismic mitigation measures are recommended, with the exception of the addition of design criteria for seismically induced soil loads on permanent below-grade basement and retaining walls.

Foundations

Soils that are anticipated to be acceptable for building support were encountered at a depth of approximately 2.5 to 3.5 feet bgs throughout the project site. Based upon this information, it is our opinion that new foundations for the project can consist of conventional concrete strip and column footings that bear directly on dense native soils or on compacted structural fill that has

been placed on a subgrade of dense native soils. Our recommended design criteria for conventional footing foundations supported on native soils or structural fill are provided below.

- Allowable bearing pressure, including all dead and live loads:
  Undisturbed, medium dense or dense soil = 2,500 psf
  Structural fill placed on medium dense or dense soil = 2,500 psf

- Minimum depth to base of perimeter footing below adjacent exterior grade = 18 inches

- Minimum depth to bottom of interior footings below top of floor slab = 12 inches

- Minimum width of wall footings = 16 inches

- Minimum lateral dimension of column footings = 24 inches

- Estimated post-construction settlement = ½ inch

- Estimated post-construction differential settlement across building width = ½ inch

A one-third increase in the above allowable bearing pressures can be used when considering short-term transitory wind or seismic loads.

Lateral loads against the building foundations can be resisted by friction between the foundation and the supporting subgrade or by passive earth pressure acting on the buried portions of the foundations. For the latter case, the foundations must be poured "neat" against the existing undisturbed soil or be backfilled with compacted structural fill. Our recommended parameters are as follows:

- Passive Pressure (Lateral Resistance)
  350 pcf, equivalent fluid weight, for structural fill or competent undisturbed native soil

- Coefficient of Friction (Friction Factor)
  0.35 for structural fill or competent undisturbed native soil

Conventional Retaining and Basement Walls

Conventional concrete retaining or basement walls may be supported on spread footing foundations which are supported per the recommendations provided above in this report. Walls that are restrained horizontally are considered unyielding and should be designed for lateral soil pressure under the at-rest condition. Walls that are free to rotate should be designed for an active lateral soil pressure.

- At-Rest Soil Pressure

  Walls supported horizontally (i.e., floor framing) are considered unyielding and should be designed under the at-rest condition. We recommend using a design lateral soil pressure with an equivalent fluid density of 45 pcf for level ground above the wall.

- Active Soil Pressure

  Cantilever walls designed to yield an amount equal to 0.002 times the wall height should be designed under an active soil pressure condition. We recommend using a design lateral soil pressure with an equivalent fluid density of 35 pcf for level ground above the wall.

- Seismic Earth Pressure

  In addition to the above triangular lateral soil pressures, a rectangular pressure of 8H should be added for permanent below grade walls to account for seismically induced dynamic soil loads. Where H is the overall height of the wall in feet.

- Passive Earth Pressure and Base Friction

  The available passive earth pressure that can be mobilized to resist lateral forces may be assumed to be equal to 350 pcf equivalent fluid weight for both undisturbed soils and engineered structural fill. The base friction that can be generated between concrete and undisturbed bearing soils or engineered structural fill may be based on an assumed 0.35. The soil design parameters are allowable values and include a safety factor of 2.

The active and at-rest design pressures are based on a fully drained wall condition and do not include the effects of surcharges. For sloped ground above walls, a surcharge equivalent to

50 percent of the soil height above the wall (soil unit weight 125 pcf) should be used in addition to the above soil pressure. Traffic and construction equipment surcharge may be considered as a uniform surcharge equivalent to two (2) feet of soil acting over the full depth of the active pressure. Below grade walls should be drained to prevent the buildup of hydrostatic pressure behind the wall, as discussed in the Drainage section of this report. Restrained walls designed should be backfilled after completing their lateral restraint is in place or per the approval of the structural design engineer.

Concrete Slabs-on-Grade

Slab-on-grade floors should be constructed on a firm, unyielding subgrade. During preparation of the slab subgrade, any areas of the subgrade that have been disturbed by construction activity should be either re-compacted or excavated and replaced with compacted structural fill. We recommend that structural fill placed below slab-on-grade floors conform to the earthwork and grading recommendations provided in this report.

To avoid moisture build-up on the subgrade, the floor slab should be placed on a capillary break, which is in turn placed on the prepared subgrade. The capillary break should consist of a 6"-minimum thickness layer of crushed rock or gravel that contains no more than five percent material finer than a No. 4 sieve. A vapor barrier, such as a 10-mil plastic membrane, should be placed over the capillary break and taped or sealed to minimize water vapor transmission upward through the slab, if post-construction vapor transmission is undesirable.

Drainage

Water should not be allowed to stand in areas where footings, slabs, or pavements are to be constructed. Final site grades should provide drainage away from the building structure. Drainage should be installed against below-grade walls to prevent moisture intrusion and a buildup of hydrostatic pressure. To facilitate drainage behind below grade walls, we recommend installing a vertical drain mat (sheet drain) such as Miradrain 6000, or equivalent, with a footing drain at the base of the wall, as illustrated in *Plate 4 – Typical Basement Wall Drainage*. Wall backfill against the vertical drain mat should be compacted to a minimum of 90 percent of the material's maximum dry density to mitigate clogging of the filter fabric.

Footing drains, consisting of a 4-inch minimum diameter, rigid perforated drain pipe, should extend around new perimeter foundations and be installed behind new basement and retaining walls. Footing drains should be bedded in washed drain rock and the rock wrapped with

geotextile filter fabric, such as Mirafi 140N, or equivalent, as illustrated *Plate 5 – Typical Footing Drain*. The drain rock should extend above the base of the vertical drain mat. Roof and other drain lines should not be connected to the footing drain system. We recommend installing a sump pump system if the footing drain system cannot drain by gravity to a discharge location. Installation of clean-outs are recommended to allow periodic maintenance of the drain system.

Grading and Earthwork

Erosion Control

Temporary erosion and sedimentation controls (TESCs), such as silt fences, should be installed down-gradient of the areas to be disturbed to prevent sediment-laden runoff from being discharged off site. Surface runoff should not be allowed to flow over the top of slopes into excavations. During wet weather, exposed soils should be covered with plastic sheeting or straw mulch. Stockpiled soils should be covered with plastic tarps. For permanent erosion control disturbed soils should be landscaped and mulched upon completion of the site work.

A construction entrance consisting of 2- to 4-inch size crushed rock should be installed to prevent tracking onto the street. The construction entrance area should be cleared and grubbed prior to rock placement and we recommend underlaying the rock with a woven geotextile such as Mirafi 500X, or equivalent, to provide separation between the rock and subgrade soil.

Excavations and Slopes

Temporary excavation slopes should not be greater than the limits specified in local, state and federal government safety regulations. We recommend that temporary cuts greater than 4 feet in height be sloped at inclinations up to 1H:1V (Horizontal: Vertical) in loose to medium dense soils. Temporary excavations in the very dense, hardpan soils can be sloped near vertical under the observation of the geotechnical engineer. Permanent cut and fill slopes should be inclined no steeper than 2.5H:1V. Steeper permanent fill slopes can be achieved with the use of geogrid for lateral reinforcement. Slopes that are to be maintained or mowed should be sloped at 3H:1V, or less. Excavation work for the project should not extend below a 1H:1V line extending from the property lines in loose to medium dense soils, in order to avoid affecting the adjacent properties.

Fill slopes should consist of granular material compacted to a minimum of 90 percent of the material's maximum dry density. If supporting structural elements, the fill should be compacted to the structural fill specification of 92 percent.

Based on the subsurface findings, groundwater seepage is expected. If significant water seepage or other adverse conditions are encountered, excavation should be halted, and the geotechnical engineer should be contacted to review the site conditions.

Structural Fill

Structural fill is defined as fill soil supporting building foundations, floor slabs, pavements, sidewalks or other structures. Structural fill should be free of organic and other deleterious substances and have a maximum fragment size of 3 inches. The site soils contain appreciable proportions of fines may be difficult to achieve compaction during wet weather, depending on the material's moisture content. Therefore, during wet weather, we recommend using a free-draining granular material containing no more than 5 percent fines content (silt and clay-size particles passing the No. 200 mesh sieve). Other materials, such as recycled crushed concrete or crushed rock may be used.

Structural fill should be placed and compacted at or near the material's optimum moisture content and in lifts that are 10 inches thick or less. Below slab-on-grade floors, foundations, and other structural elements, structural fill should be compacted to a minimum of 92 percent of the material's maximum dry density, as determined by ASTM Test Designation D-1557 (Modified Proctor). For driveways, structural fill should be compacted to 90 percent, with the exception of the top 12 inches which should be compacted to 95 percent. Fill behind retaining walls and next to building foundation walls should be compacted to a minimum of 90 percent (92 percent if supporting structural elements; if supporting pavements, the top 12 inches should be compacted to 95 percent).

Utility trench backfill within the City right-of-way should be compacted to the specifications required by the City, sewer or water district. Observation and compaction testing may be required at the time of fill placement to document and verify that the compaction specifications are achieved.

LIMITATIONS

The findings and recommendations stated herein are based on field observations, our experience on similar projects and our professional judgment. The recommendations presented herein are our professional opinions derived in a manner consistent with the level of care and skill ordinarily exercised by other members of the profession currently practicing under similar conditions in this area and within the project schedule and budget constraints. No warranty is expressed or implied. In the event that site conditions are found to differ from those described in this report, we should be notified so that the relevant recommendations in this report can be reevaluated and modified if appropriate.

CLOSING

We appreciate the opportunity to provide you with geotechnical engineering services for this project. Please do not hesitate to contact us if you have any questions regarding this report.

Sincerely,

GEO Group Northwest, Inc.

Garrett Dean, G.I.T.
Staff Engineering Geologist

William Chang, P.E.
Principal Engineer

Attachments:

Plate 1 – Site Location Map
Plate 2 – Site Plan
Plate 3 – Site Geologic Hazards Map
Plate 4 – Typical Basement Wall Drain
Plate 5 – Typical Footing Drain
Appendix A – USCS Soil Classification & Test Pit Logs
Appendix B - Pilot Infiltration Test Data & Calculations

Source: King County iMap, 2022

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

SITE LOCATION MAP

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	2/18/2022	GD	WC	G-5514	1

LEGEND

TP-1 — **Test Pit Number & Approximate Location**

0 30' 60'

Approx. Scale: 1 inch = 60'

N

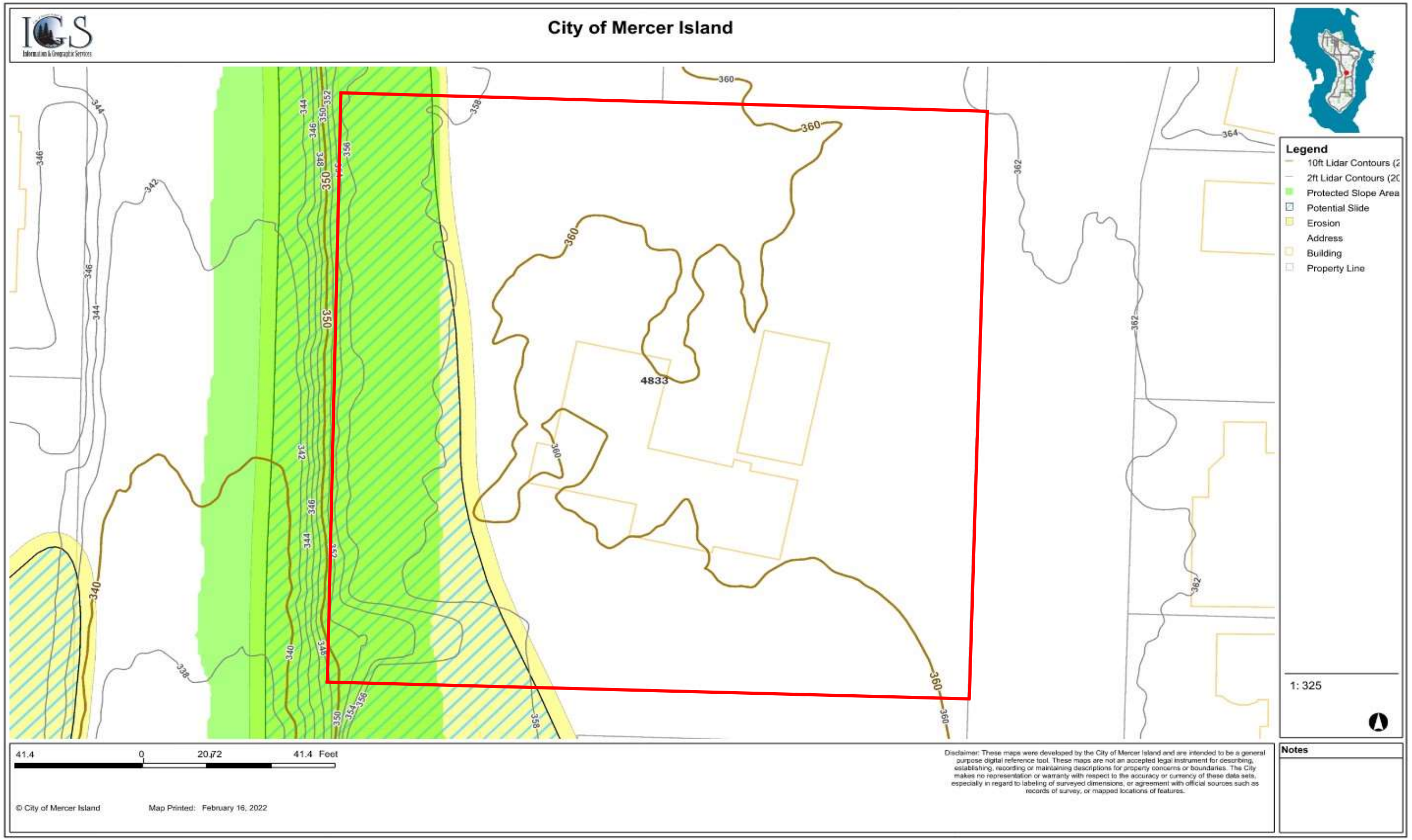
This Site Plan Adapted From City of Mercer Island GIS Portal, Retrieved February, 2022.

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

SITE PLAN

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
As Shown	2/18/22	GD	WC	G-5514	2



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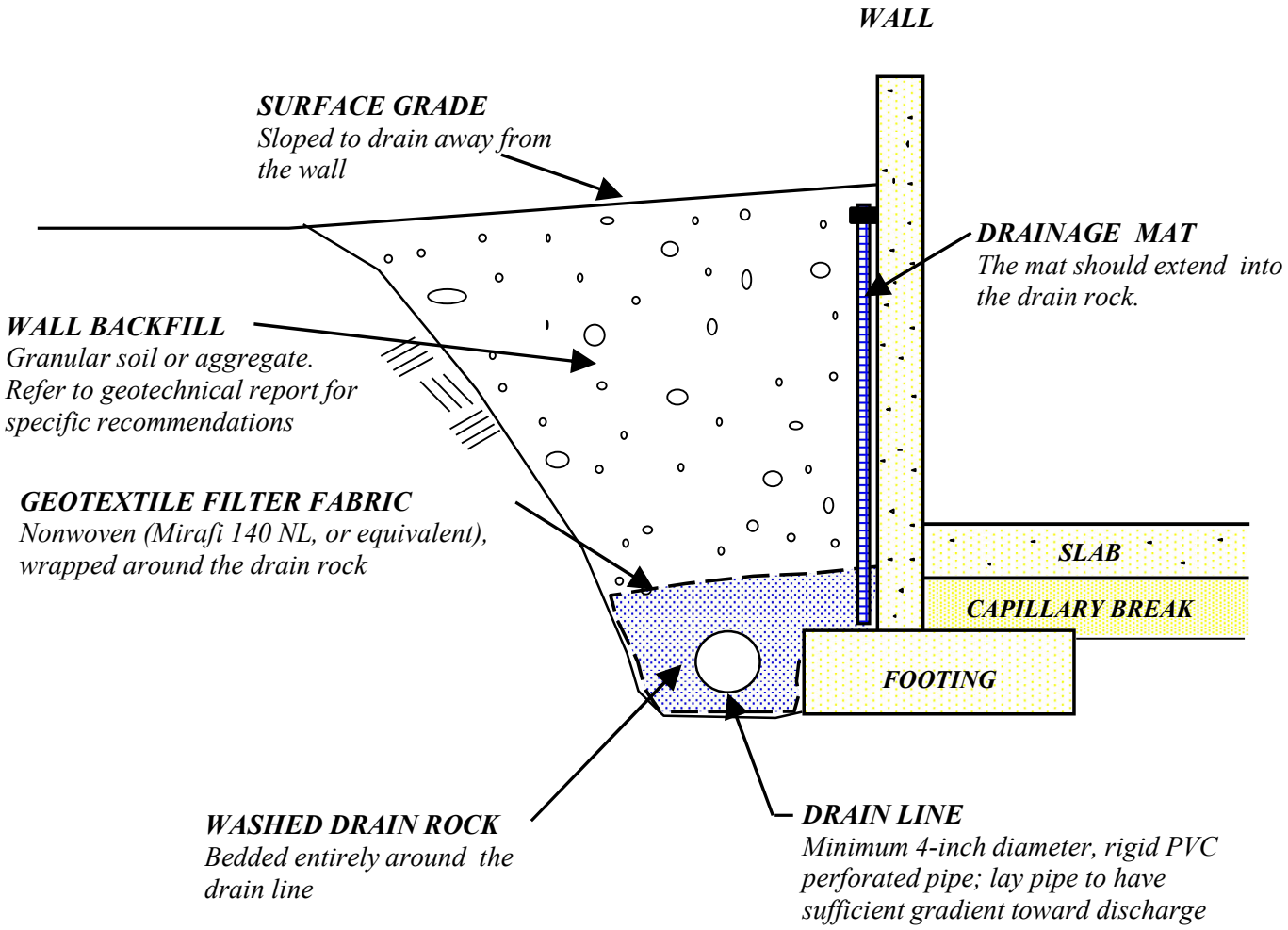
Geotechnical Engineers, Geologists, & Environmental Scientists

SITE GEOLOGIC HAZARDS MAP

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	AS SHOWN	DRAWN BY	GD	CHECKED BY	WC	DATE	2/18/2022	PROJECT NO.	G-5514	PLATE	3

TYPICAL BASEMENT WALL DRAIN



NOT TO SCALE

NOTES:

1.) Do not replace rigid PVC pipe with flexible corrugated plastic pipe.

2.) Perforated PVC pipe should be tight jointed and laid with perforations oriented downward. The pipe should be gently sloped to provide flow toward the tightline or discharge location.

3.) Do not connect other drain lines into the footing drain system.

4.) Backfill should meet structural fill specifications if it will support driveways, sidewalks, patios, or other structures. Refer to the geotechnical engineering report for structural fill recommendations.

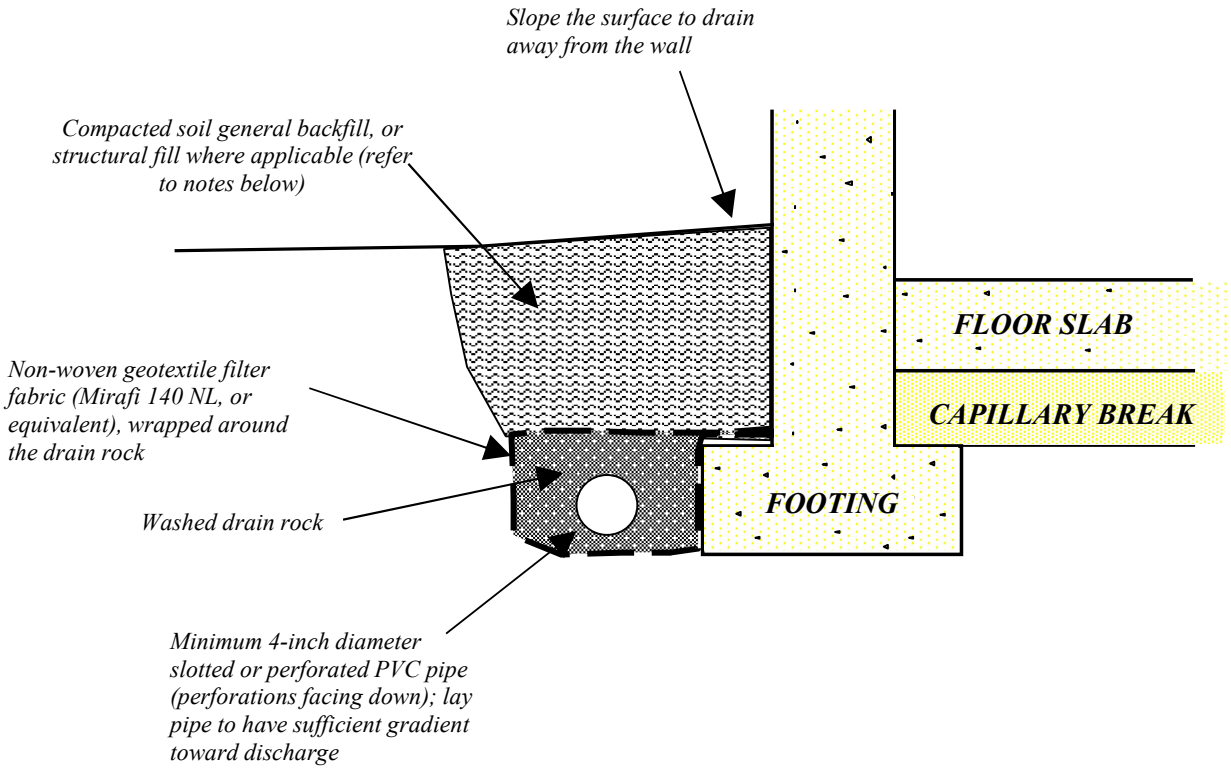
5.) Surface grade above the backfill can be covered with a layer of relatively impermeable topsoil or pavement or slab to reduce infiltration of surface water into the backfill and drainage system

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TYPICAL BASEMENT WALL DRAIN
PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE	DATE	MADE	CHKD	JOB NO.	PLATE
NONE	2/18/2022	GD	WC	G-5514	4

TYPICAL FOOTING DRAIN



NOT TO SCALE

NOTES:

1.) Perforated or slotted rigid PVC pipe should be tight jointed and laid with perforations or slots down, and with positive gradient toward discharge location(s). The pipe should be placed at or slightly above the elevation of the bottom of the footing. Do not replace rigid PVC pipe with flexible corrugated plastic pipe.

2.) Do not connect other drainage lines to the footing drain lines. Drain line cleanouts should be installed at appropriate locations to allow inspection and maintenance of the lines after construction.

3.) If the backfill will support sidewalks, driveways, patios, or other structures, it should be compacted to at least 90% of its maximum dry density based on the Modified Proctor test method, except that the top 12 inches of the backfill should be compacted to at least 95% of the maximum dry density.

4.) The geotextile filter fabric should be placed around the drain rock as shown, and not wrapped directly around the pipe.

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TYPICAL FOOTING DRAIN
PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

SCALE: NONE	DATE: 2/18/2022	MADE: GD	CHKD: WC	JOB NO. G-5514	PLATE 5

APPENDIX A

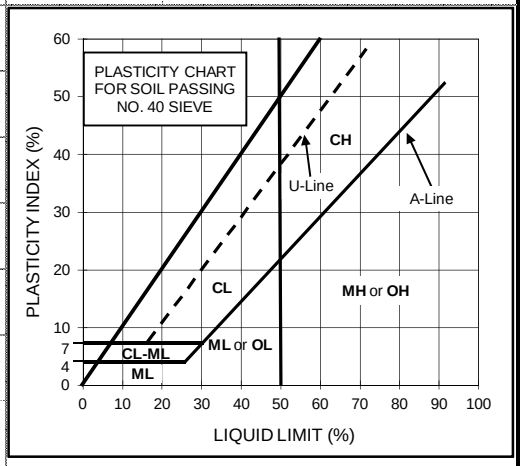
G-5514

USCS SOIL CLASSIFICATION & TEST PIT LOGS

SOIL CLASSIFICATION & PENETRATION TEST DATA EXPLANATION

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS (More Than Half by Weight Larger Than No. 200 Sieve)	GRAVELS (More Than Half Coarse Fraction is Larger Than No. 4 Sieve)	CLEAN GRAVELS (little or no fines)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 4 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			GP	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES LITTLE OR NO FINES		CLEAN GRAVELS NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (with some fines)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	GM: ATTERBERG LIMITS BELOW "A" LINE. or P.I. LESS THAN 4
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		GC: ATTERBERG LIMITS ABOVE "A" LINE. or P.I. MORE THAN 7
	SANDS (More Than Half Coarse Fraction is Smaller Than No. 4 Sieve)	CLEAN SANDS (little or no fines)	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 6 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES		CLEAN SANDS NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (with some fines)	SM	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE with P.I. LESS THAN 4
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE with P.I. MORE THAN 7
FINE-GRAINED SOILS (Less Than Half by Weight Larger Than No. 200 Sieve)	SILTS (Below A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	ML	INORGANIC SILTS, ROCK FLOUR, SANDY SILTS OF SLIGHT PLASTICITY		
		Liquid Limit > 50%	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOIL		
	CLAYS (Above A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	CL	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, CLEAN CLAYS		
		Liquid Limit > 50%	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS		
	ORGANIC SILTS & CLAYS (Below A-Line on Plasticity Chart)	Liquid Limit < 50%	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
		Liquid Limit > 50%	OH	ORGANIC CLAYS OF HIGH PLASTICITY		
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS		



SOIL PARTICLE SIZE

FRACTION	U.S. STANDARD SIEVE			
	Passing		Retained	
	Sieve	Size (mm)	Sieve	Size (mm)
SILT / CLAY	#200	0.075		
SAND				
FINE	#40	0.425	#200	0.075
MEDIUM	#10	2.00	#40	0.425
COARSE	#4	4.75	#10	2.00
GRAVEL				
FINE	0.75"	19	#4	4.75
COARSE	3"	76	0.75"	19
COBBLES	76 mm to 203 mm			
BOULDERS	> 203 mm			
ROCK FRAGMENTS	> 76 mm			
ROCK	>0.76 cubic meter in volume			

GENERAL GUIDANCE FOR ENGINEERING PROPERTIES OF SOILS, BASED ON STANDARD PENETRATION TEST (SPT) DATA

SANDY SOILS				SILTY & CLAYEY SOILS		
Blow Counts N	Relative Density, %	Friction Angle ϕ, degrees	Description	Blow Counts N	Unconfined Strength q_u, tsf	Description
0 - 4	0 -15		Very Loose	< 2	< 0.25	Very soft
4 - 10	15 - 35	26 - 30	Loose	2 - 4	0.25 - 0.50	Soft
10 - 30	35 - 65	28 - 35	Medium Dense	4 - 8	0.50 - 1.00	Medium Stiff
30 - 50	65 - 85	35 - 42	Dense	8 - 15	1.00 - 2.00	Stiff
> 50	85 - 100	38 - 46	Very Dense	15 - 30	2.00 - 4.00	Very Stiff
				> 30	> 4.00	Hard

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists
13705 Bel-Red Road Bellevue, WA 98005
Phone (425) 649-8757 E-mail: info@geogrourpnw.com

TEST-PIT: TP-1

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, glass bottle, wood fragments (**topsoil/fill**)	S1	34.0	-Probe 30" at 0'
2	SM	Silty SAND, brown to brownish-gray, dense, damp; with some subrounded gravel, minor cobbles (**weathered till**)	S2	14.7	-Probe 4" at 1.5' -Probe 3.5" at 2.5'
3	SM	Silty SAND, brownish-gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S3	18.5	-Probe 0.5" at 3'
4		Total depth = 3.1 feet Minor groundwater seepage encountered at approximately 2.5 feet.			
5					
6					
7					

TEST PIT: TP-2

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)	S1	16.2	-Probe 18" at 0' -Probe 18" at 1'
2	SM	Silty SAND, brown to gray, loose to medium dense, damp; with some subrounded gravel, minor cobbles, minor mottling, roots (**weathered till**) -becomes gray at 1.5'	S2	16.1	-Probe 3" at 2'
3	SM	Silty SAND to Sandy SILT, gray, very dense, damp; with some subrounded gravel, mottling (**glacial till**)	S3	17.8	-Probe 5" at 3' -Probe 0.5" at 3.5'
4		Total depth = 3.5 feet No groundwater encountered.			
5					
6					
7					

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A2

TEST-PIT: TP-3

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 358 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)			-Probe 30" at 0'
					-Probe 6" at 1'
2	SM	Silty SAND, brown to brownish-gray, dense, damp; with some subrounded gravel and cobbles (**weathered till**)	S1	20.7	-Probe 4" at 2'
3	SM	Silty SAND, gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S2	17.1	-Probe 0.5" at 2.8'
4		Total depth = 3.0 feet No groundwater encountered			
5					
6					
7					

TEST PIT: TP-4

LOGGED BY GD **LOG DATE:** 1/21/2022 **GROUND ELEV.** 358 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose to medium dense, moist; with some subrounded gravel, organics, small roots (**topsoil**)			-Probe 20" at 0.5'
2	SM	Silty SAND, brownish-gray, medium dense, damp; with some subrounded gravel, minor cobbles, minor mottling (**weathered till**)	S1	13.2	-Probe 10" at 1.7'
3	SM	Silty SAND to Sandy SILT, gray, very dense, damp; with some subrounded gravel, mottling (**glacial till**)	S2	15.8	-Probe 4.5" at 3' -Probe 0" at 3.3'
4		Total depth = 3.3 feet No groundwater encountered.			
5					
6					
7					

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A3

TEST-PIT: TP-5

LOGGED BY GD LOG DATE: 1/21/2022 GROUND ELEV. 360 feet +/-

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1	SM	Silty SAND, dark brown, loose, moist; with some subrounded gravel, organics, small roots, (**topsoil**)			-Probe 25" at 0'
			S1	28.7	
2	SM	Silty SAND, brown, dense, damp; with some subrounded gravel (**weathered till**)	S2	38.2	-Probe 0" at 2.1'
3	SM	Silty SAND, gray, very dense, damp; with some subrounded gravel, minor cobbles, mottling (**glacial till**)	S3	25.3	-Probe 1" at 3'
4		Total depth = 3.0 feet No groundwater encountered. Pilot infiltration test performed at depth of approximately 26 inches.			
5					
6					
7					

TEST PIT:

LOGGED BY LOG DATE: GROUND ELEV.

DEPTH ft.	USCS	SOIL DESCRIPTION	SAMPLE No.	Water %	OTHER TESTS/ COMMENTS
1					
2					
3					
4					
5					
6					
7					

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists, & Environmental Scientists

TEST PIT LOGS

PROPOSED SHORT-PLAT
4833 - 90TH AVE SE
MERCER ISLAND, WASHINGTON

JOB NO.	G-5514	DATE	2/18/22	APPEND.	A4

APPENDIX B

G-5514

PILOT INFILTRATION TEST DATA & CALCULATIONS

Pilot Infiltration Test Data

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Time	Time Interval (minutes)	Water Level (inches)	Water Level Change (inches)	Flow Reading (sec/gal)	Comments/Remarks
7:30	- -	- -	- -	17.14	Start adding water. Flow approximately 3.50 gpm
8:12	42	12	12	75.00	Flow reduced to approximately 0.8 gpm
9:12	60	12	0	75.00	
10:12	60	12	0	75.00	
11:12	60	12	0	75.00	
12:12	60	12	0	75.00	
13:12	60	12	0	200.00	Flow reduced to approximately 0.3 gpm
14:12	60	12	0	200.00	

Time	Time Interval (minutes)	Water Level (inches)	Water Level Change (inches)	Comments/Remarks
15:12	- -	12 1/4	0	
15:22	10	12	- 1/4	
15:32	10	11 3/4	- 1/4	
15:42	10	11 1/4	- 1/2	
15:52	10	11	- 1/4	
16:02	10	10 5/8	- 3/8	
16:12	10	10 1/4	- 3/8	
16:22	10	10	- 1/4	
16:32	10	9 3/4	- 1/4	
16:42	10	9 1/2	- 1/4	
8:50	928	1 1/2	-8	End of readings and testing.

Test performed on January 20th, 2022.
Water level data is vertical height of water in pit.

Pilot Infiltration Test Calculations

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Steady-State Calculation:

Pit Dimensions: 4 ft x 3 ft = 12 sqft

Average Steady Flow Rate: 0.40 gpm

0.40 gpm x (60 min/hr) = 24 gph

24 gph x (1 cuft / 7.48 gal) = 3.21 cuft/hr

3.21 cuft/hr / 12 sqft = 0.2675 ft/hr = 3.21 in/hr **Field Rate = 3.21 in/hr**

Correction Factor: 0.28

Design infiltration rate: 3.21 in/hr x (0.28)

= 0.90 in/hr

Design Rate = 0.90 in/hr

Test performed on January 20th, 2022.

Pilot Infiltration Test Calculations

4833 - 90th Ave SE
Mercer Island, Washington

Test Pit TP-5

Falling Head Calculation:

Time interval: 15:12 to 08:50 (1058 minutes)

Total change in water level: 12.25 in - 1.5 in = 10.75 in

Overall infiltration rate: 10.75 in / 17.63 hrs = 0.61 in/hr

Field Rate = 0.61 in/hr

Correction Factor: 0.28

Design infiltration rate: 0.61 in/hr x (0.28)

= 0.17 in/hr

Design Rate = 0.17 in/hr

Test performed on January 20th, 2022.

GEO Group Northwest, Inc.
Geotechnical Engineers, Geologists
& Environmental Specialists

September 16th, 2022 G-5514

Mr. Jesse Tam
Phone: (206) 948-9902
Email: jesset28@aol.com

Subject: **Addendum to -**
Geotechnical Engineering Investigation & Soil Infiltration Evaluation
Proposed Short-Plat
4833 – 90th Ave SE
Mercer Island, Washington

Reference: **"Geotechnical Engineering Investigation & Soil Infiltration Evaluation, Proposed Short-Plat, 4833 – 90th Ave SE, Mercer Island, Washington," GEO Group Northwest, Inc., G-5514, February 18th, 2022.**

Dear Mr. Tam:

We reviewed the Preliminary Grading and Utilities Plan for the project. The plan was prepared by Pacific Land Engineering, LLC and is attached to this letter. Based on our review, we understand that a stormwater detention vault is proposed in the central-east portion of the property. The stormwater vault as proposed will discharge westerly to the City stormwater utility along the Island Crest Way east right-of-way. Construction of the stormwater facility will require excavations within the steep slope area at the west side of the site and adjacent City right-of-way. Our geotechnical recommendations regarding the construction of the proposed stormwater facility are provided in the following sections to this report.

Excavation Recommendations

Stormwater Vault

Based on the proposed configuration we estimate that excavations necessary for the vault construction will reach depths of up to approximately 15 feet below grade. Temporary excavations into the very dense, glacial till soils for construction of the stormwater vault and

storm drain to the utility can be completed at near vertical inclinations as recommended in our geotechnical report. Approximately 1 to 2 feet of weathered soils at the surface may need to be sloped at 1H:1V, if present. During the installation of the stormwater vault, the excavation walls should be draped with plastic sheeting to protect workers from loose gravel, if present.

Stormwater Drain to Utility

Excavation into the steep slope region at the west property line and adjacent right-of-way will be required to complete the stormwater tie-in to the City utility. Based on the results of our geotechnical investigation, the slope is underlain with cemented glacial till soils. In our opinion, excavation trenching into the slope for the stormwater tie-in can be completed at near vertical inclinations without destabilizing the slope. For worker protection, the excavated trenches should be shored with trench boxing or equivalent.

Sincerely,

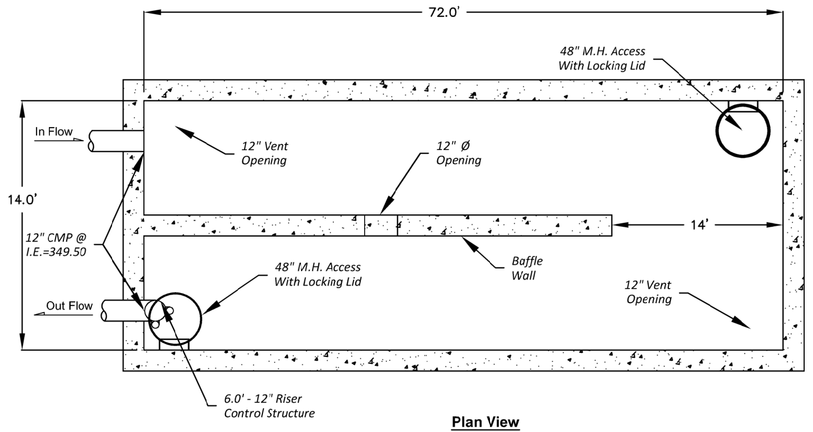
GEO GROUP NORTHWEST, INC.

Garrett Dean, G.I.T.
Staff Engineering Geologist

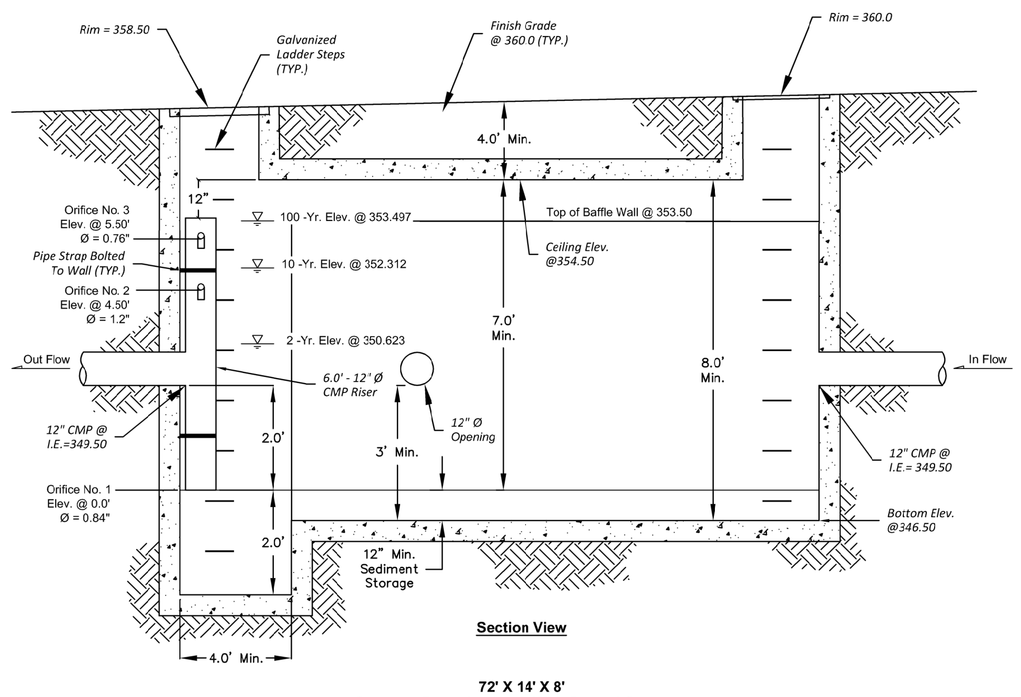
William Chang, P.E.
Principal Engineer

Attachment:

"Preliminary Grading and Utilities Plan," Project 4833 MI_4 – Lot Short Plat, Sheet No. C-6.0, Prepared by Pacific Land Engineering

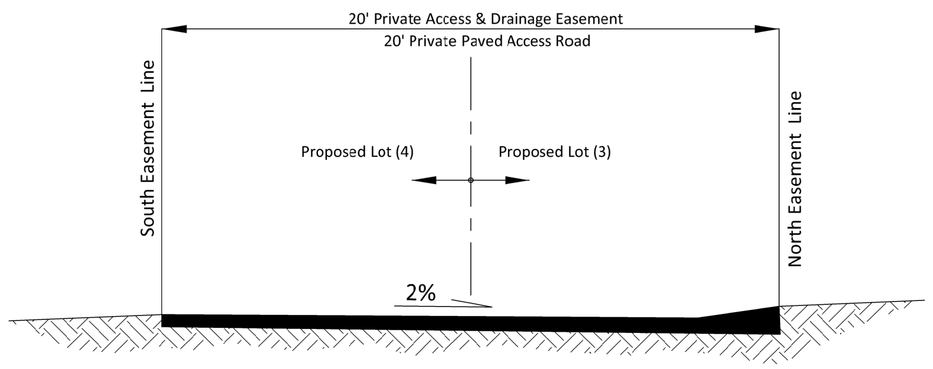


Plan View



Section View

72' X 14' X 8'
Concrete Detention Vault With Control Structure
N.T.S.

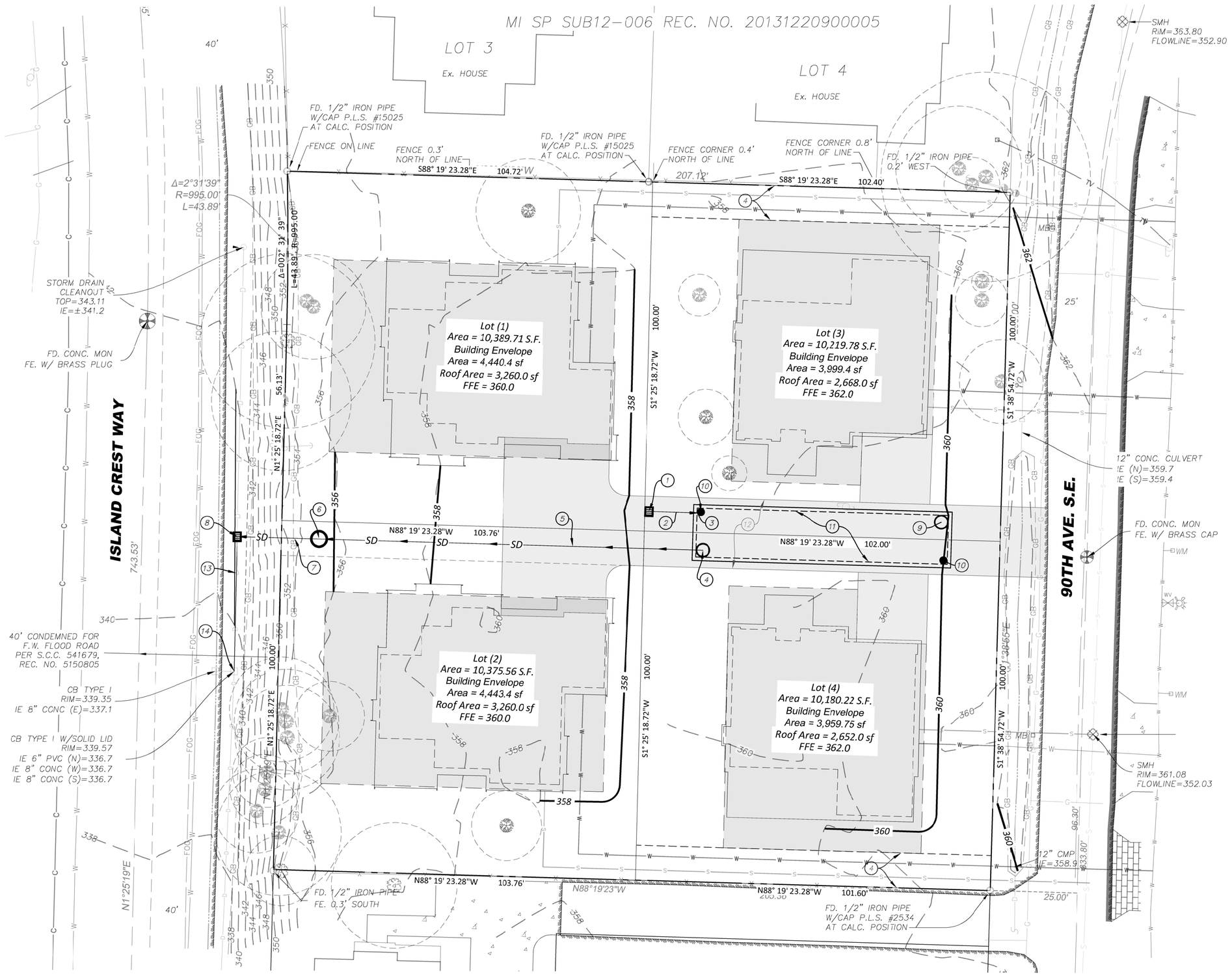


20' Wide Private Access Road

N.T.S.

SEC. 19, T.24N., R.5E., W.M.

MI SP SUB12-006 REC. NO. 20131220900005



20' 0' 20' 40'

SCALE : 1" = 20'

LEGEND:

- = POWER POLE
- = GUY POLE
- = GUY ANCHOR
- = OVERHEAD POWER
- = FIRE HYDRANT
- = WATER VALVE
- = WATER METER
- = WATER LINE (PAINTED LOCATION)
- = UNDERGROUND COMMUNICATION (PAINTED LOCATION)
- = TELEVISION RISER
- = UNDERGROUND TELEVISION (PAINTED LOCATION)
- = CATCH BASIN
- = STORM DRAIN LINE/ CULVERT
- = GAS VALVE
- = UNDERGROUND GAS LINE (PAINTED LOCATION)
- = SEWER MANHOLE
- = SEWER LINE
- = MAIL BOX
- = EVERGREEN TREE
- = DECIDUOUS TREE
- = WOOD BOARD FENCE LINE
- = FOG LINE (LANE STRIPE)
- = DITCH LINE
- = GRADE BREAK
- = EDGE OF PAVEMENT/CURB LINE
- = CONCRETE
- = CONCRETE PAVERS
- = GRAVEL
- = TBM = 60D SPIKE IN POWER POLE ELEV = 361.47 (NAVD 1988)

1. 48" Type - II CB W/Locking Grate Rim = 357.75 I.E. = 350.20 - 12" Ø, E
2. 14' - 12" Ø HDPE @ 5%
3. 12" Ø HDPE I.E. = 349.50
4. 48" Ø Locking Lid Marked Drain Rim = 358.50 I.E. = 349.50
5. 110' - 12" Ø HDPE @ 10%
6. 52" Type II SDMH W/ Locking Lid Marked Drain Rim = 355.0 I.E. = 338.50 12" HDPE, E & W
7. 24.20' - 12" Ø HDPE @ 3.1%
8. Type - I CB W/Locking Grate Rim = 340.75 I.E. = 337.75 New 12" Ø, E & S Remove Ex. 8" Ø, S
9. 48" Ø Locking Lid Marked Drain Rim = 360.0 I.E. = 349.50
10. 12" Ø Vent Opening W/Locking Cover.
11. Underground Storm Water Detention Vault 72' Long X 14' Wide X 8' Deep, See Detail Hereon.
12. 20' Wide Paved Private Access Road See Detail Hereon.
13. Remove existing 8" Storm Pipe, and install New 38.6 LF - 12" CMP @ 2.7%
14. Connect New 12" CMP to Existing CB I.E. = 336.70 - N

Preliminary Cut/Fill Summary

	Cut Factor	Fill Factor	Cut		Fill		Net
Surface3	**1.000**	**1.000**	1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>
Totals			1,184.0 Sq. Ft.	530.0 Cu. Yd.	16,680.0 Sq. Ft.	1,200.0 Cu. Yd.	670.0 Cu. Yd.<Fill>

Revisions

No.	Date	By

Project 4833 MI _ 4 - Lot Short Plat

Preliminary Grading and Utilities Plan

Plan Plotted For :
Initial Submittal

PACIFIC LAND ENGINEERING
Civil Engineering · Development Services · Land Use Consulting
Permit Expediting Services · Inspection Services
Bellevue, WA · www.pacificlandwa.com · (425) 615 - 6160
info@pacificlandwa.com

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MAZEN S. HAIDAR
STATE OF WASHINGTON
36034
REGISTERED PROFESSIONAL ENGINEER

Date: 10 / 01 / 2022
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Job Number:
220520 - PLE - 2211

DWG Date:
10 / 01 / 2022

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OF
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ARBOR INFO LLC
2406 N Castle Way Brier, WA, 98036

Tree Assessment
For
Homelink Capital
At
4833 90th Ave SE
Mercer Island, Washington

Date
4/20/2022

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Addenda

I. Tree Location Map
II. Tree Assessment Summary Table
III. Mercer Island Check list
IV. Mercer Island Tree Inventory Form

1. Introduction

I was contacted by Mazen Haidar at Pacific Land Engineering to describe and assess the condition and viability of trees on and adjacent to 4833-90th Ave SE, Mercer Island, WA. This report summarizes my observations and conclusions.

2. Competence

- Certified Arborist (International Society of Arboriculture, ISA #23136, PN 0426 A)
- Registered Consulting Arborist (American Society of Consulting Arborists #499).
- Tree Risk Assessment Qualified (ISA).
- Certified forester (Society of American Foresters #951)
- Bachelor of Science degree in Forest Management from the University of Washington
- Licensed Washington State Real Estate Managing Broker #11534

3. Client

The client to whom this report is addressed is:

Mazen Haider
Pacific Land Engineering
mazen@pacificlandwa

And

Jintao (Adison) Cui
Homelink Capital LLC
adisoncui@outlook.com

4. Assignment, Purpose and Use of Report

The assignment is to describe and assess the condition and viability of on-site and off-site trees adjacent to the subject parcel. Protection recommendations in conformance with the City of Mercer Island "Tree Submittal Check List" are pending development plans.

5. Limits of Assignment

The assignment is limited to the information gathered during the site visit April 19, 2022 (date of assessment) and references noted in this report. No excavation or sampling was undertaken to determine unseen defects. No inspection of trees not reported herein was made.

A site plan indicating the current condition of the property was provided and is included in the Addenda with tree locations noted.

6. Site Description

4833-90th Ave SE Mercer Island, WA
King County Parcel No. 435130-0487, 41,165 square feet; 0.95 acres

The subject property contains an unoccupied single-family residence on near level ground.

Four new single-family residences are planned for the site.

7. Methodology

Each tree was measured for diameter at 4.5-feet above ground, (or equivalent) total height, percentage of live green crown, and dripline (extent of live limbs).

Each tree was assessed as to its vitality, structure, vigor and viability:

Vigor or condition:

Health(Vitality) : Biotic

- Good: No evidence of fungal infection or decay; expected to survive without disturbance to its normal life expectancy. (40-100 years in this case)

- Fair: Tree has initial fungal decay or evidence of insect habitat and is less likely to survive to normal life expectancy. Some with minor defects, are rated viable,

- Poor: Tree has significant fungal decay and defects that render it not likely to survive three years.

Structural: Abiotic

- Good: no significant abiotic or mechanical defects

- Fair: less than preferred form, defects such as breaks in the bole, poor limb attachments, included bark, poor root contact, etc.

- Poor: Broken or cracked bole or limbs; root plate compromised

Viability:

- A measure of whether the tree is likely to live to its "normal" life span or has defects limiting that potential or poses a risk to the residence or proposed development is a simple 'yes/no' rating.

8. Tree Description

Refer to the attached Tree Assessment Summary Form. There are a total of sixty-one on-site trees and nine off-site. A summary of the trees follows.

Table 1- Tree Category Summary – On site

Category	Number
Total	61
Total viable	39
36"+	5
24"+	11
Exceptional	8
Large Regulated	30
Large Regulated to be Removed	TBD
Percentage Retention	TBD0%

Table 2- Tree Category Summary – Off site - Right of Way

Category	Number
24"+	0
Exceptional	0
Large Regulated	5
Large Regulated to be Removed	TBD
Percentage Retention	TBD%

Table 3- Tree Category Summary – Off site – Private

Category	Number
24"+	1
Exceptional	0
Large Regulated	3
Large Regulated to be Removed	TBD
Percentage Retention	TBD%

9. Replacement Trees **TBD**

10. Summary TDB

The on-site trees are all non-viable and or hedged and therefore no replacements are required in the event of removal. The off-site trees are well away from planned construction activities.

11. Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Ownership of the subject trees as provided by the client is assumed to be correct. No responsibility is assumed for legal matters. No opinion as to the property line location is made.
2. Care has been taken to obtain all information from reliable sources. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including additional fees.
4. This report and any values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
5. The exhibits in this report are included to assist the reader and are not necessarily to scale.
6. Unless expressed otherwise, information in this report covers only items that were examined, and reflects the condition of those items at the time of inspection. The subject site was cleared of all vegetation at the time of inspection therefore the extent of removals is inferred from adjacent undisturbed areas. The inspection is limited to visual examination of accessible portions of the trees and plants.
7. Loss or alteration of any part of the report invalidates the entire report. Ownership of any documents related to this report passes to the client only.
8. The liability of ArborInfo LLC its contractors and employees is limited to the client only and only up to the amount of the fee actually received for the assignment.
9. *There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating*

tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long-term condition of any tree, but represent my opinion based on the observations made.

10. *NEARLY ALL TREES IN ANY CONDITION STANDING WITHIN REACH OF IMPROVEMENTS OR HUMAN USE AREAS REPRESENT HAZARDS THAT COULD LEAD TO DAMAGE OR INJURY. THE ASSESSMENT IS VALID FOR TWO YEARS FROM THE DATE OF INSPECTION, ONLY.*

11. PERTINENT JURISDICTION RULES AND REGULATIONS SHOULD BE CONSULTED PRIOR TO THE REMOVAL OF ANY TREE.

Respectfully Submitted,

Thomas M. Hanson, CA, RCA

Addenda

I. Tree Location Map
II. Tree Assessment Summary Table
III. Mercer Island Check list
IV. Mercer Island Tree Inventory Form

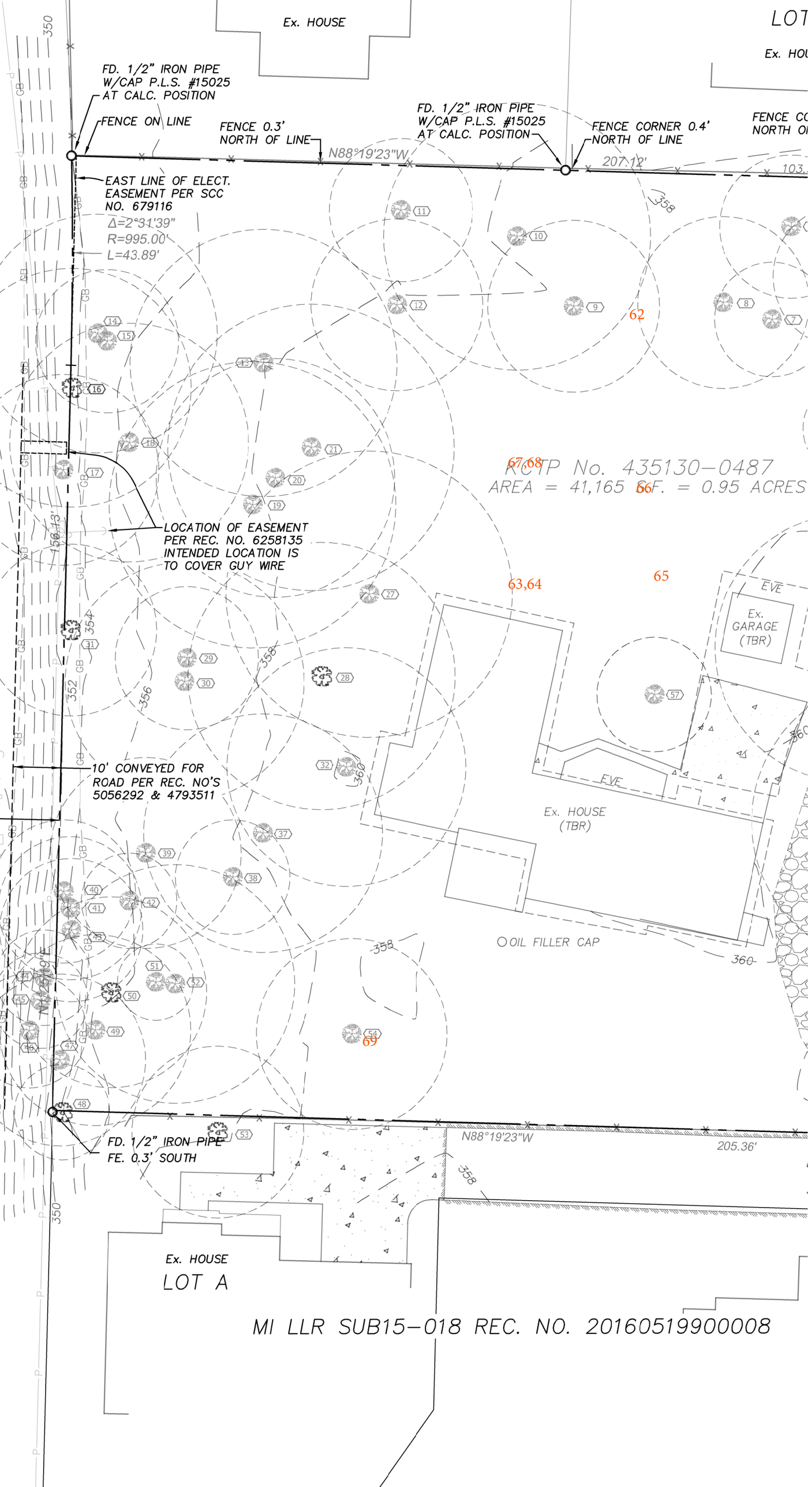
Tag #	Tree Assessment																	
	Site: Homelink Capital, 4833 - 90th Ave SE, Mercer Island, WA												Date:	4/20/2022				
	Tree #	Species		DBH	Height	Crown Ratio	Dripline(ft)				Root Zone/Outer Radius	Root Zone/Inner Radius	Vigor		Viable	Large Regulated	Exceptional	
		Common	*Scientific*	(inches)	(feet)	(%)	N	S	E	W	(feet)	(feet)	Vitality	Structure	Viable			Comments
	On Site																	
570	3	Bigleaf maple	*Acer macrophylum*	22.5	90	50	22	30	22	20	24	12	Good	Good	Yes	✓		
571	4	Douglas-fir	*Psuedotsuga menziesii*	41.5	115	40	18	22	18	20	20	10	Good	Fair	Yes	✓	✓	Sweep North
760	5	Pacific madrone	*Arbutus menziesii*	14.6	70	30	12	10	0	24	12	6	Good	Good	Yes	✓	✓	
755	6	W. red cedar	*Thuja plicata*	0	0	0	0	0	0	0	0	0						Cut down
762	7	Bigleaf maple	*Acer macrophylum*	7.5	40	20	0	15	11	6	8	4	Fair	Fair	No			Leans, brokend top
763	8	Bigleaf maple	*Acer macrophylum*	12.1	50	20	0	18	0	16	9	4	Poor	Poor	No			Asymetric, leans south
767	9	Bigleaf maple	*Acer macrophylum*	20.9	50	20	0	14	0	28	11	5	Poor	Poor	No			Hollow, top out
768	10	Black cottonwood	*Populus trichocarpa*	28.7	120	40	36	30	26	36	32	16	Good	Good	Yes			Ivy
778	11	Pacific madrone	*Arbutus menziesii*	11.9	40	10	2	4	4	0	3	1	Poor	Poor	No			Top out, small crown, minor decay
786	12	Pacific madrone	*Arbutus menziesii*	18.9	80	30	30	0	6	6	11	5	Fair	Fair	No			Dying, dead limbs
787	13	Bigleaf maple	*Acer macrophylum*	19.5	75	60	20	14	24	22	20	10	Good	Fair	Yes	✓		Two codominants fused at 4-8'-small codom decay
788	14	Bigleaf maple	*Acer macrophylum*	0	0	0	0	0	0	0	0	0						Cut down
789	15	Bigleaf maple	*Acer macrophylum*	14.5	40	10	6	4	4	4	5	2	Poor	Fair	No			Dying, dead limbs
836	16	Douglas-fir	*Psuedotsuga menziesii*	17.5	30	40	14	17	8	18	14	7	Fair	Poor	No			Topped for utilities, overhangs Island Crest
788	18	Pacific madrone	*Arbutus menziesii*	20.1	45	20	6	8	12	12	10	5	Fair	Fair	Yes	✓	✓	Ivy
849	19*	Bigleaf maple	*Acer macrophylum*	19.6	55	60	8	20	4	22	14	7	Good	Good	Yes	✓		
850	20*	Holly	*Ilex sp.*	12.7	40	60	16	16	16	16	16	8	Good	Good	Yes			
851	21	Bigleaf maple	*Acer macrophylum*	21.2	90	30	30	8	4	4	12	6	Good	Fair	Yes	✓		
742	22	Red alder	*Alnus rubra*	12.2	50	40	8	24	0	24	14	7	Poor	Fair	No			Adjacent to snag, decay, dying
602	23	Red alder	*Alnus rubra*	0	0	0	0	0	0	0	0	0						Cut down
603	24	W. red cedar	*Thuja plicata*	23.5	55	100	16	16	16	16	16	8	Good	Good	Yes	✓		
604	25*	Bigleaf maple	*Acer macrophylum*	19.6	55	70	20	20	20	18	20	10	Good	Good	Yes	✓		
628	26	Douglas-fir	*Psuedotsuga menziesii*	38.6	125	80	26	26	26	26	26	13	Good	Good	Yes	✓	✓	
854	27*	Bigleaf maple	*Acer macrophylum*	32.9	90	60	28	28	34	30	30	15	Good	Good	Yes	✓	✓	
855	28	W. red cedar	*Thuja plicata*	39.1	80	90	24	24	24	24	24	12	Fair	Good	Yes	✓	✓	Thin crown
847	29	Pacific madrone	*Arbutus menziesii*	10.4	50	20	24	6	18	0	12	6	Fair	Fair	No			Thin crown
846	30*	Bigleaf maple	*Acer macrophylum*	20.0	70	40	24	18	16	16	19	9	Good	Good	Yes	✓		Pruned for utility lines

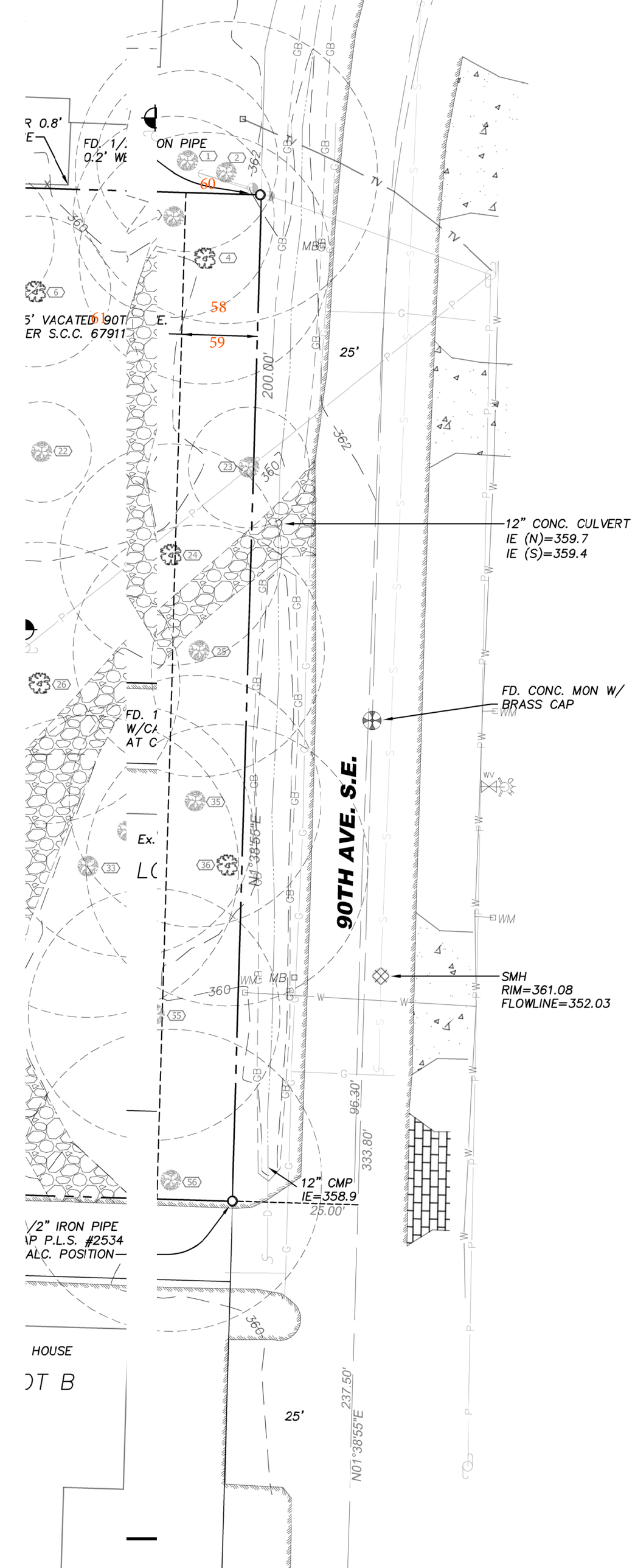
Tree Assessment																		
Site: Homelink Capital, 4833 - 90th Ave SE, Mercer Island, WA												Date:	4/20/2022					
Tag #	Tree #	Species		DBH	Height	Crown Ratio	Dripline(ft)				Root Zone/Outer Radius	Root Zone/Inner Radius	Vigor		Viable	Large Regulated	Exceptional	
		Common	*Scientific*	(inches)	(feet)	(%)	N	S	E	W	(feet)	(feet)	Vitality	Structure	Viable			Comments
On Site																		
844	31	Douglas-fir	*Psuedotsuga menziesii*	15.5	25	40	14	14	14	14	14	7	Good	Fair	Yes	✓		Topped for utility lines
856	32*	Bigleaf maple	*Acer macrophylum*	28.3	90	60	18	30	28	28	26	13	Good	Fair	Yes	✓		Sucker codominant
634	33	Pacific madrone	*Arbutus menziesii*	28.1	80	60	12	35	0	40	22	11	Good	Good	Yes	✓		Leans west
633	34	Bigleaf maple	*Acer macrophylum*	25.1	80	30	14	18	0	25	14	7	Fair	Fair	Yes	✓		Smaller codominant is dead
631	35*	Bigleaf maple	*Acer macrophylum*	31.6	80	40	28	32	20	26	27	13	Fair	Poor	No			Perched on nurse stump, brittle cinder fungus
632	36	Deodora cedar	*Cedrus deodora*	19.4	90	80	7	16	16	16	14	7	Good	Good	Yes	✓		
865	37	Bigleaf maple	*Acer macrophylum*	17.6	90	30	30	20	6	28	21	11	Good	Good	Yes	✓		
881	38	Bigleaf maple	*Acer macrophylum*	7.1	40	20	0	16	16	0	8	4	Good	Poor	Yes			
866	39*	Bigleaf maple	*Acer macrophylum*	21.2	60	20	14	6	6	6	8	4	Fair	Good	No			Pruned for utility lines, low crown ratio
885	40	Pacific madrone	*Arbutus menziesii*	7.5	20	30	12	2	0	10	6	3	Good	Fair	Yes			Hangs over Island Crest
886	41	Pacific madrone	*Arbutus menziesii*	10.9	20	30	16	0	6	16	10	5	Good	Fair	Yes	✓	✓	Topped for utilities
867	42	Pacific madrone	*Arbutus menziesii*	6.5	20	20	6	0	0	16	6	3	Good	Fair	Yes		✓	Topped for utilities
887	43	Pacific madrone	*Arbutus menziesii*	9.6	20	30	2	6	2	10	5	3	Good	Fair	Yes		✓	Topped for utilities
890	47*	Pacific madrone	*Arbutus menziesii*	10.3	20	20	6	5	0	12	6	3	Poor	Poor	No			Topped for utilities, low crown ratio
888	49	Bigleaf maple	*Acer macrophylum*	18.7	80	40	18	26	12	18	19	9	Good	Good	Yes	✓		
883	50	Douglas-fir	*Psuedotsuga menziesii*	26.1	85	30	14	14	14	14	14	7	Good	Good	Yes	✓		
868	51	Bigleaf maple	*Acer macrophylum*	11.1	35	10	1	0	0	0	0	0	Poor	Fair	No			Low crown ratio
882	52*	Bigleaf maple	*Acer macrophylum*	21.9	80	40	23	28	28	6	21	11	Good	Good	Yes	✓		
898	54*	Pacific madrone	*Arbutus menziesii*	13.9	80	60	16	8	8	8	10	5	Good	Good	Yes	✓		
635	55	Bigleaf maple	*Acer macrophylum*	32.0	80	70	20	24	20	29	23	12	Good	Good	Yes	✓	✓	Ivy
637	56*	Bigleaf maple	*Acer macrophylum*	36.9	85	70	25	30	25	25	26	13	Fair	Fair	Yes	✓		10% dead limbs
991	57	Dogwood	*Cornus florida*	6.4	18	90	9	9	9	9	9	5	Good	Good	Yes			
1001	58	Scoulers Willow	*Salix scourliana*	9.5	35	20	0	6	3	3	3	2	Poor	Poor	No			ivy, top broken out
1002	59	Scoulers Willow	*Salix scourliana*	9.2	35	40	5	8	15	0	7	4	Poor	Poor	No			ivy, pistol butt, leans over utilities
1004	61	Bigleaf maple	*Acer macrophylum*	8.5	16	10	0	3	0	0	1	0	Poor	Poor	No			Stem broken
1005	62	Bitter cherry	*Prunus emarginata*	8.5	45	50	12	12	12	12	12	6	Good	Good	Yes			
1006	63	Pacific madrone	*Arbutus menziesii*	25.2	90	70	0	36	28	10	19	9	Good	Good	Yes	✓		

Tree Assessment

Site: Homelink Capital, 4833 - 90th Ave SE, Mercer Island, WA **Date:** 4/20/2022

Tag #	Tree #	Species		DBH	Height	Crown Ratio	Dripline(ft)				Root Zone/Outer Radius	Root Zone/Inner Radius	Vigor		Viable	Large Regulated	Exceptional	
		Common	*Scientific*	(inches)	(feet)	(%)	N	S	E	W	(feet)	(feet)	Vitality	Structure	Viable			Comments
		On Site																
1007	64	Pacific madrone	*Arbutus menziesii*	8.5	26	20	4	3	24	0	8	4	Poor	Poor	No			Dyingm, 30% dead limbs
1008	65	Common Hawthorn	*Cratagus laevigata*	6.1	18	90	10	12	10	8	10	5	Good	Good	Yes			
1009	66	Bitter cherry	*Prunus emarginata*	10.1	45	40	16	8	6	12	11	5	Fair	Fair	No			20% dead limbs
1010	67	Bigleaf maple	*Acer macrophylum*	15.6	80	30	0	12	0	34	12	6	Good	Fair	Yes	✓		
1011	68	Pacific madrone	*Arbutus menziesii*	18.1	80	20	22	0	0	14	9	5	Fair	Good	Yes	✓	✓	Low crown ratio
1012	69	Bitter cherry	*Prunus emarginata*	14.8	80	60	18	16	20	8	16	8	Good	Good	Yes	✓		
		Off Site																
569	1	Bigleaf maple	*Acer macrophylum*	15.4	60	20	10	3	0	16	7	4	Good	Good	Yes	✓		Asymetric
568	2	Bigleaf maple	*Acer macrophylum*	25.5	60	60	36	18	36	22	28	14	Good	Fair	Yes	✓		Leans northeast
837	17	Bigleaf maple	*Acer macrophylum*	8.4	22	30	3	14	10	12	10	5	Good	Poor	No			Topped for utilities, overhangs Island Crest
964	44	Pacific madrone	*Arbutus menziesii*	5.0	20	20	4	2	0	8	4	2	Fair	Fair	Yes			Topped for utilities
965	45	Pacific madrone	*Arbutus menziesii*	7.2	25	20	8	4	0	8	5	3	Good	Fair	Yes		✓	Topped for utilities
966	46	W. red cedar	*Thuja plicata*	5.0	22	70	4	5	2	6	4	2	Good	Good	Yes			
891	48	Douglas-fir	*Psuedotsuga menziesii*	6.8	18	20	6	6	6	4	6	3	Poor	Poor	No			Topped for utilities, low crown ratio
708	53	Douglas-fir	*Psuedotsuga menziesii*	15.0	75	50	16	10	6	10	6	3	Good	Fair	Yes	✓		Sweep
1003	60	Bigleaf maple	*Acer macrophylum*	10.5	70	30	0	16	16	0	8	4	Good	Fair	Yes	✓		
	* multiple stems converted to single																	





= POWER POLE
= GUY POLE
= GUY ANCHOR
= OVERHEAD POWER
= FIRE HYDRANT
= WATER VALVE
= WATER METER
= WATER LINE (PAINTED LOCATION)
= UNDERGROUND COMMUNICATION (PAINTED LOCATIO
= TELEVISION RISER
= UNDERGROUND TELEVISION (PAINTED LOCATION)
= CATCH BASIN
= STORM DRAIN LINE/ CULVERT
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= GRADE BREAK
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= CONCRETE
= CONCRETE PAVERS
= GRAVEL

= TBM = 60D SPIKE IN POWER POLE
ELEV = 361.47 (NAVD 1988)

TREE TABLE

TREE #	DBH/SPECIES	POINT #
1	13" MAPLE	569
2	20" MAPLE	568
3	24" MAPLE	570
4	42" FIR	571
5	15" MADRONA	760
6	30" CEDAR	755
7	19" MAPLE (DEAD)	762
8	12" MAPLE	763
9	18" ALDER (DEAD)	767
10	28" MAPLE	768
11	11" MADRONA	778
12	17" DECIDUOUS	786
13	21" MAPLE	787
14	19" MAPLE	790
15	13" MAPLE	789
16	16" FIR	836
17	8" MAPLE	837
18	17" MADRONA	788
19	2-10", 2-8" MAPLE	849
20	3-6" DECIDUOUS	850
21	22" MAPLE	851
22	2-12" ALDER (DEAD)	742
23	14" ALDER (DEAD)	602
24	21" CEDAR	603
25	3-10" MAPLE	604
26	34" FIR	628
27	14",18",19" MAPLE	854
28	38" CEDAR	855
29	10" MADRONA	847
30	12", 14" MAPLE	846
31	12" FIR	844
32	36" MAPLE	856
33	29" MADRONA	634
34	25" MAPLE	633
35	2-20" MAPLE	631
36	17" FIR	632
37	14" MAPLE	865
38	7" MAPLE	881
39	2-12" MAPLE	866
40	8" MADRONA	885
41	8", 10" MADRONA	886
42	7" MADRONA	867
43	6", 8" DECIDUOUS	887
44	7" MADRONA	964
45	4" MADRONA	965
46	10" MADRONA	966
47	7", 8", 18" MADRONA	890
48	6" MADRONA	891
49	14" MAPLE	888
50	23" FIR	883
51	14" MAPLE (DEAD)	868
52	2-15" MAPLE	882
53	15" FIR	708
54	8", 11", 15" DECIDUOUS	898
55	28" MAPLE	635
56	2-21" MAPLE	637
57	6" DECIDUOUS	991

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater: 4
List tree numbers: 4, 26, 28, 56

Number of trees 24" or greater (including 36" or greater): 13
List tree numbers: 4,10, 26, 27, 28, 32, 33, 34, 35, 50, 55, 56, 63

Number of trees from Exceptional Tree Table (MICC 19.16): 23
List tree numbers: 4, 5, 11, 12, 18, 26, 27, 28, 29, 33, 35, 40, 41, 43, 47, 54, 55, 56, 58, 59, 63, 64, 68

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site: 49 (A)
List tree numbers: 3-5,8-13,16,18-22, 24-41,43,47,49,50-52,54-56,58-59,63-64,66-68

Number of Large Regulated Trees on site proposed for removal: 33 (B)
List tree numbers: 8-13,16,18-22,24-35,37,39,55-56,58-59,64,66-67

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30%: 32.7 %

RIGHT OF WAY TREES

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way: 5
List tree numbers: 17,44,45,46,48

Number of Large Regulated Trees in right of way proposed for removal: 0

List tree numbers: None

Reason for removal: N/A

TREE REPLACEMENT

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"	1	0	0
10" up to 24"	2	16	32
Greater than 24" up to 36"	3	3	9
Greater than 36" and any Exceptional Tree	6	14	84
		TOTAL TREE REPLACEMENTS	125

CITY OF MERCER ISLAND

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PHONE: 206.275.7605 | www.mercerisland.gov
Inspection Requests: Online: www.mybuildingpermit.com VM: 206.275.7730

TREE SUBMITTAL CHECKLIST

If a box is checked, please provide the information in your next submittal

SUBMITTAL ITEMS

1. The Mercer Island Tree Inventory Form

- [x] Provide the City's Mercer Island Tree Inventory Form

2. Arborist report/tree inventory

- [x] Provide an Arborist report, prepared by a qualified Arborist. Include the following information in the arborist report.
  - [x] 1. Description of how the arborist meets the threshold requirements for Qualified Arborist.
  - [x] 2. A complete description of each tree's diameter, species, critical root zone, limits of allowable disturbance, health, condition, and viability.
  - [x] 3. A description of the method(s) used to determine the limits of allowable disturbance (i.e., critical root zone, root plate diameter, or a case-by-case basis description for individual trees).
  - [ ] 4. Any special instructions specifically outlining any work proposed within the limits of disturbance protection areas (i.e. hand-digging, air space, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare).
  - [ ] 5. For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation, windfirmness, unsuitability species, etc. If there is no reasonable alternative action (pruning, cabling, etc.) possible, replacement recommendations must be given.
  - [ ] 6. Describe the impact of necessary tree removal on the remaining trees, including those in a grove or on adjacent properties.
  - [ ] 7. Describe timing and installation of tree protection measures. Such measures must include fencing and be in accordance with the tree protection standards as outlined in MICC 19.10.
  - [ ] 8. The suggested location and species of replacement trees to be used when required. The report shall include planting and maintenance specifications to ensure long term survival.
  - [x] 9. **A Tree Inventory** containing the following:
    - [x] a. A numbering system of all existing large trees on the property (with corresponding tags on trees). The inventory shall also include large trees on adjacent property with driplines or critical root zones extending into the property.
    - [x] b. Tree size (diameter). Where a tree splits into several trunks close to ground level, the dbh (Diameter at Brest Height) for the tree is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)2 +(stem2)2 +(stem3)2]).
    - [ ] c. Proposed tree status (retained or proposed for removal).
    - [ ] d. Tree type or species.
    - [x] e. Identify all Exceptional trees and differentiate between those less than 24 inches and those greater than or equal to 24 inches in diameter.
    - [x] f. Brief general health or condition rating of each tree (i.e. poor, fair, good, etc.).

3. Site/tree retention plan

Indicate the following on all civil/utility and grading sheets. If there are no civil sheets indicate on the architectural site plan

- ☐ 1. Location of all proposed improvements (building footprint, access, utilities, buffers, required landscape areas).
- ☐ 2. Surveyed location of all large trees and Exceptional trees on the property
- ☐ 3. Show dripline and limits of disturbance for Large trees on site and adjacent properties if driplines extend over the subject property line.
- ☐ 4. Trees labeled corresponding to the tree inventory numbering system on the Mercer Island Tree Inventory Form, and Arborist Report.
- ☐ 5. Identify Exceptional trees using different symbols for trees less than 24 inches and trees greater than or equal to 24 inches.
- ☐ 6. Location of tree protection measures. Chain-link fence will be required for exceptional trees. Show silt fence outside tree protection measures. Do not use any x in the protection illustration.
- ☐ 7. Limits of excavation near potential saved trees (e.g. excavation limits for building foundation).
- ☐ 8. Indicate clearing limits/limits of disturbance (LOD) around all trees potentially impacted by site disturbances - grading, demolition, construction activities (including approximate LOD of off-site trees with overhanging driplines), etc.
- ☐ 9. Proposed tree status (trees to be removed or retained) noted by an 'X' for removal.

4. Replanting plan

☐ Provide the Replanting plan showing proposed locations of any required replacement trees.

PEER REVIEW AND CONFLICT OF INTEREST

A peer review of the tree permit application by a qualified arborist may be required to verify the adequacy of the information and analysis. **The applicant shall bear the cost of the peer review.**

The City Arborist may require the applicant retain a replacement qualified arborist or may require a peer review where the City Arborist believes a conflict of interest may exist.

For example, if an otherwise qualified arborist is employed by a tree removal company and prepares the arborist report for a development proposal, a replacement qualified arborist or peer review may be required.

ARBORIST QUALIFICATION

For tree reviews associated with a development proposal, a qualified arborist must have

- A minimum of three (3) years' experience working directly with the protection of trees during construction
- Have experience with the likelihood of tree survival after construction
- Be able to prescribe appropriate measures for the preservation of trees during land development
- ISA Tree Risk Assessment Qualification

☐ Your qualified arborists must have at least one (1) of the following credentials:

- ISA Certified Arborist;
- ISA Certified Arborist Municipal Specialist;
- ISA Board Certified Master Arborist;
- American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
- Society of American Foresters (SAF) Certified Forester for Forest Management Plans;

ADDITIONAL INFORMATION

Additional Information. The City Arborist or Code Official may require additional documentation, plans, or information as needed to ensure compliance with applicable City regulations.

Engineer's Conclusion

In our opinion, the proposed development is feasible and should not pose any significant impacts to the adjacent properties and to the surrounding environment, provided all proposed improvements are constructed per City of Mercer Island Requirements and provided all Geotechnical recommendations are followed and fully complied with.

o0o

Comments to application for preliminary short subdivision to divide into 4 lots.

File number: SUB22-009

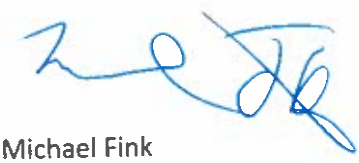
Permit Type: III

Applicant Jintao (Adison) Cui/ Home-Link Capital LLC

Property: 4833 90th Ave SE, Mercer Island

My name is Michael Fink. I am a lawyer and have lived at 9012 SE 50th Street, Mercer Island since 1996. I walk past this property almost every day. There are a number of beautiful large trees on this property including a couple of Madronas which are not that common on Mercer Island. The trees on the property also act as a wind break coming off from the west to the houses that are east of the property. While I have no issue with the property being subdivided and built on, I, as well as several other neighbors that I have spoken with, would like to see the City strongly enforce its tree ordinance and not allow the developer to take out any more trees than are absolutely necessary. Homes on Mercer Island should be built in harmony with the existing landscape as much as possible. Allowing a developer to clear cut a lot because it is cheaper for them is not a good enough reason.

Thank you for your consideration.



Michael Fink

Michael & Melanie Fink
9012 SE 50th Street
Mercer Island, WA 98040

SEATTLE WA 980
17 JAN 2023 PM 5 L

City of Mercer Island
Planning Department
9611 SE 36th Street
Mercer Island, WA 98040

98040-37821

Andrew Leon

From: Veronika Ziegler <veronika.ziegler@gmail.com>
Sent: Wednesday, February 8, 2023 1:59 PM
To: Andrew Leon
Subject: SUB22-009

Dear Mr. Leon,

I am writing regarding the Revised Public Notice of Application for file no. SUB22-009. As property owners on the north-east side of the property, we want to express concern regarding the proposed development, specifically in regard to the proposed removal of trees 3 and 4, the placement of utility lines along the north of the property, and the potential impact of those actions upon adjacent trees on our property which we believe will be negatively impacted by the proposed development.

Trees 3 (a Large Regulated Bigleaf Maple) and 4 (an Exceptional Douglas Fir) are closely planted to three trees that border our property (these include trees 1 and 2 on the planning documents, as well as a smaller, unnumbered tree also shown on the documents). The submitted planning documents show the driplines and critical root zones of our trees in the plan, as these extend over the subject property lines. We are concerned that the water and sewer lines will impact the critical root zones of our trees, and affect the safety and continued viability of our trees. Removal of trees 3 and 4, which have grown to share a canopy with our trees, may further accelerate decline in our trees. Tree 4 is a dominant tree in the canopy and currently provides a barrier against wind. We are worried that the combined impact of disturbance to the critical root zones below, as well as removal of support trees above, may cause our trees to need removal or pose a hazard.

We would welcome insight into how concerns such as these are handled by the city. Thank you.

Sincerely,

Veronika Ziegler and Jeremy Ung
4815 90th Ave SE
Mercer Island, WA 98040

Andrew Leon

From: KeithandKaren Chan <keithandkaren@gmail.com>
Sent: Wednesday, February 8, 2023 2:36 PM
To: Andrew Leon
Subject: Comments for SUB22-009

Hi Andrew,

We live in the mid-Mercer Island area and want to voice concerns regarding the application for 4833 90th Ave SE:

1. The number of trees cut is shocking. The arborist report indicated >60% of the trees are viable and with good vitality, with over 53 on-site trees included. However, 32 of these are to be cut, including many which are considered protected trees under the definition of MICC 19.10.005. Cutting these trees completely change the naturesque appeal of mid-Mercer Island. We do not want the neighborhood to turn into a dense north-island look and request the application to keep additional trees along the north and east perimeter to improve the appearance in the neighborhood. For example, trees #10, 13, 3, 4, 5, 21, 24, 25, 67 and 68 should remain to conform to the appearance of the surrounding neighborhood, and some of these trees are considered Large-Regulated or Exceptional.

2. The lot is quite small for the planned subdivision, the result of which will be the addition of a 3rd development of a closely-packed cluster of 4 homes, next to two other similar developments. This is changing the mid-Mercer Island neighborhood into a semi-urban density that is significantly more packed together than the rest of the neighborhood. This proposal goes against the sort of environment and feel that we want; Mercer Island should not have the same density as Bellevue or Seattle.

3. We are concerned about the height of the new buildings. Is there going to be a limit on the building height such that it conforms to the surrounding homes?

Thank you,
Keith

KTC KARR TUTTLE CAMPBELL

Jacque E. St. Romain
Attorney at Law
701 Fifth Avenue, Suite 3300
Seattle, Washington 98104
Direct: (206) 224 8089
Main: (206) 223 1313
Fax: (206) 682 7100
jstromain@karrtuttle.com

September 1, 2023

VIA US MAIL AND E-MAIL
Andrew Leon, Planner
City of Mercer Island Community Planning and Development
9611 SE 36th Street
Mercer Island, WA 98040
andrew.leon@mercergov.org

RE: SUB22-009 (Cui Preliminary Short Subdivision)
REVISED Request for Information #1
4833 90th Ave SE

Mr. Leon,

I represent Home Link Capital LLC (the "Applicant"), the owner and developer of the property located at 4833 90th Ave SE, Mercer Island, Washington (the "Property") with respect to their Preliminary Short Subdivision application (the "Application"). I am in receipt of your REVISED Request for Information #1 dated June 5, 2023 (the "Review Letter").

We appreciate your second review as it has clarified where additional information is actually needed. The Applicant has gone through the comments and provided updated information to address the issues you identified in the Review Letter, including submitting revised civil plans, a revised project narrative, and responses to your Review Letter. This response is primarily intended to address the arborist comments and the comments received from the neighbors.

The Applicant has retained a new arborist, Cascara Tree Consulting ("Cascara"). Cascara has provided a written response to the arborist comments in the Review Letter (the "Arborist Response to City Review Comments"), and has also provided an Arborist Report, a Tree Retention Plan and a Tree Planting Plan. From your review of these documents, it will be evident that the Applicant has satisfied the Mercer Island City Code ("Code") requirements related to the retention and replacement of trees.

This should further be evidenced by the following responses to the public comments received from the neighbors:

First, you provided a copy of comments received from Michael Fink. Mr. Fink stated he had no issue with the property being subdivided and built on but asked the City to "enforce its tree ordinance" and "not allow the developer to take any more trees than are absolutely necessary." As is demonstrated by the Arborist Report, Tree Retention Plan and Tree Planting Plan, the Applicant

seeks to only remove those trees necessary for the development and the applications are in compliance with the City's Code provisions related to trees.

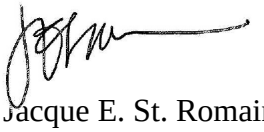
Second, you provided a copy of comments received from Veronika Ziegler. Ms. Ziegler expressed concern that the removal of Trees 3 and 4 on the Property may potentially cause some harm to some trees that are located nearby on her property and also expressed concern about the location of utility lines along the north of the Property. The Applicant must comply with utility provider requirements for utility lines and the location is dictated by those constraints. But, as is evident from the Tree Retention Plan provided herewith, Trees 3 and 4 will be retained. This satisfies Ms. Ziegler's request.

Finally, you provided a copy of comments received from Keith Chan. Mr. Chan requested that the Applicant retain Trees 10, 13, 3, 4, 5, 21, 24, 25, 67 and 68, in order to "conform to the appearance of the surrounding neighborhood." He also stated that he did not want Mercer Island to have "the same density as Bellevue or Seattle" and wanted to know if there was going to be a limit on building height. Because the City adopted code provisions allowing the type of density proposed by the Applicant, the Applicant must be allowed to subdivide and develop its property, even if neighbors would prefer less density. The Applicant will abide by the Code provisions related to density and height. With respect to the specific trees identified by Mr. Chan, Trees 3, 4 and 5 are being retained. As identified in the Arborist Report, Trees 13, 21, 25, and 67 are not viable trees. Thus, they cannot be kept by the Applicant. Of the trees identified by Mr. Chan, this leaves only Trees 10, 24, and 68 as viable trees that are being removed. Tree 10 is not an exceptional tree, is covered in ivy, and is being removed because of its size and its proximity to the houses being constructed on lots 1 and 3. Tree 24 is also not an exceptional tree and is located too close to the house to be constructed on Lot 3. Removing this tree is necessary to allow a house to be built on that property given the set back requirements. Finally, Tree 68 is an exceptional tree, but the trunk of Tree 67 (a non-viable tree) is growing so that it is touching and wrapping around the trunk of Tree 68. Retaining Tree 68 may not be possible when Tree 67 is removed. Further, Tree 68 is in the location where the house is planned to be located on Lot 1. The house footprint on Lot 1 cannot feasibly shift west to accommodate Tree 68 without impacting the slope along Island Crest Way.

The Code contemplates allowing an applicant to remove trees. Specifically, MICC 19.10.010(C) states only that an application is required for approval to remove trees as part of a development and that a minimum of 30% of trees will need to be retained. The Applicant is in compliance with this requirement, retaining 45% (10 of 22) of the viable trees on the Property. Further, while exceptional trees should be retained if possible, the Code recognizes that not all exceptional trees will be able to remain. The Applicant is conscious of the desire to have a lot of trees in the area to retain the feel of the neighborhood. For this reason, the Applicant plans to install 90 replacement trees over the Property. This will end with a net result of more trees on the Property, not less. Overall, the Applicant's plans are in compliance with the Code requirements and the Applicant is entitled to remove Trees 10, 24 and 68.

Thank you in advance for your consideration of the information submitted in response to your Review Letter. We look forward to receiving a timely response to this letter and confirmation from all departments (particularly planning, fire and civil) that the plans, as proposed, are preliminarily approved so that the Applicant can proceed with preparing the next documents needed for the entitlement process. Should you have any questions, please do not hesitate to reach out to me at the contact information provided above.

Best regards,



Jacque E. St. Romain

COMMUNITY PLANNING & DEVELOPMENT
206.275.7605
www.mercerisland.gov/cpd

April 6, 2023

Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th St, 3186
Mercer Island, WA 98040

RE: SUB22-009 (Cui Preliminary Short Subdivision)
Request for Information #1
4833 90th Ave SE

Dear Jintao (Adison) Cui:

The City of Mercer Island Community Planning and Development Department has performed a review for compliance with the zoning code, Title 19 of the Mercer Island City Code (MICC) for the above-referenced Preliminary Short Subdivision application. The following issues need to be addressed before we can continue processing of the application:

General:

1. The City received several comment letters from neighbors about this proposal. Please review the attached comment letters and provide a response to the neighbors' concerns.

2. Please remove Sheet C-1.1 from the plan set.

Planning:

1. Please provide a completed code compliance matrix for Chapter 19.08 MICC (attached to the email accompanying this letter). All tabs in the code compliance matrix must be filled out.

2. Please show building pads for Parcels 1 through 4 that are consistent with the requirements of MICC 19.09.090:

   - The building pad shall be located to minimize or prevent impacts as indicated in the following:
     - Removal of trees and vegetation required for retention pursuant to Chapter 19.10 MICC shall be prevented.
     - Disturbance of the existing, natural topography as a result of anticipated development within the building pad shall be minimized.
     - Impacts to critical areas and critical area buffers shall be minimized, consistent with the provisions of Chapter 19.07 MICC.
     - Access to the building pad shall be consistent with the standards contained in MICC 19.09.040.

- Building pads shall not be located within:
  - Required front, rear, or side yard setbacks. Please note that both lots are irregular. The width of both lots must be determined using lot width circles. A lot width circle is the largest circle that can be drawn within the boundaries of the lot, excluding easements. The lot width is the diameter of the circle. Please also note that the revised lots must be designed so the existing structures meet current setback requirements.
  - Streets or rights-of-way.
  - Critical areas, buffers, or critical area setbacks. Building pads may be located within geologically hazardous areas and associated buffers when all of the criteria listed in MICC 19.09.090(A)(2)(c)(i) through (iii) are met.

Civil Engineering:

1. Please provide a plat map that shows only bearings/distances, easements, and legal descriptions. The plat map must tie to at least two known city monuments.

2. The private drainage pipe on Island Crest Way (Item 13 on sheet C-6.0) should not be located in the public right-of-way.

3. The existing drainage ditch along the frontage of 90th Ave SE shall be piped as a part of the plat improvements.

4. Please add the following note to Sheet C-6.0:

   "The utility design (water, sewer, and storm) shown on Sheet C-6.0 is conceptual only. They have not been reviewed for construction. All design related to water, sewer, storm and roadway are not approved and will be reviewed under a separate permit."

For questions about civil engineering requirements, please contact Ruji Ding, Senior Development Engineer, at ruji.ding@mercerisland.gov or at 206-275-7703.

Fire:

1. Please add the following note to the face of the plat:

   "All building permits are subject to meeting current fire code requirements at the time of a complete submittal, including fire apparatus access as outlined in adopted code sections of the International Fire Code Appendix D. Fire plan reviews will be conducted at time of building permit submittal and may require additional fire protection systems and/or additional fire prevention measures for building permit approval."

For questions about fire requirements, please contact Jeromy Hicks, Fire Marshal, at jeromy.hicks@mercerisland.gov or at 206-794-2512.

Arborist

1. Trees numbered 6, 14, and 23 were previously cut down without a permit. Please provide the reason for their removal. Please provide the diameter of the trees at 4.5 feet or a stump diameter. Appraisal for the value of trees 6, 14, and 23 is required even if the

appraisal is retroactive with only the stump left. Sheet C-2.1 refers to tree 6 in poor condition, but the arborist report does not. The arborist shall determine the viability of trees. Please update the plan set and arborist report. Include trees 6, 14, and 23 in the tree inventory worksheet calculation if they were removed in the last five years.

2. Tree 36 is shown for retention on the plans but is listed as removed in the Tree Inventory. The plans and the Tree Inventory must match. Please confirm that this is the case for all trees. Please see this link for the Tree Inventory and Replacement Submittal Information form.

3. Replacement is required for any trees that are removed according to the replacement ratios set forth in MICC 19.10.070. It appears that most of the property is an exceptional grove. All exceptional trees and exceptional grove trees (even those below 24 inches) must be replaced with six trees. At least half of the trees need to be native to the Pacific Northwest (please see this Native Plant Guide for more information). The trees need to be at least 10 feet apart from each other, structures, fences, and utilities. If you can show no room exists on site for all trees, the remainder can be a fee in lieu if requested. A tree watering plan must also be submitted to ensure the trees survive long-term.

4. Please update the tree report with designation of trees being a part of an exceptional grove according to the following definition: "*Tree, grove:* A grove means a group of eight or more trees each ten inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree."

5. Several exceptional trees are on site and must be retained and protected at arborist-provided tree protection zones unless the removal is justified under MICC 19.10.060(A)(3). It appears that most of the property is an exceptional grove. Any exceptional trees over 24 inches proposed for removal must be justified for removal under that code. Trees 26, 27, 33, 55, and 63 are all exceptional, over 24 inches, and in at least fair condition. These trees should be prioritized for protection unless their removal is justified. This exceptional grove information must be provided by the arborist.

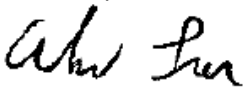
6. The following trees are shown as retained but not protected at their dripline: 3, 4, 5, 9, 10, 11, 23, 36, 56, 62, 65, 66, and 69. All trees must be protected under MICC 19.10.080. The project arborist must address this code section when encroachment into driplines is proposed. The trees would be considered removed because of root damage. Please update the Tree Submittal Checklist according to MICC 19.10.090. After the limits of allowable disturbance are determined by the project arborist, these limits must be included on the tree protection plan. Any excavation within the driplines of exceptional trees or other trees required to be retained must be concluded not to damage the trees. This will require advanced root analysis air excavation under arborist supervision. The limits of allowable disturbance must be confirmed to locate the building pads. A preliminary civil plan with access and utilities should be created to confirm trees proposed for retention can indeed be protected.

For questions about tree requirements, please contact John Kenney, City Arborist, at john.kenney@mercerisland.gov or at 206-275-7713.

With your resubmittal, please provide a cover letter responding to each of the items above. Please reference page/sheet numbers noting where the requested information can be found. An incomplete resubmittal may delay your project.

The Planning Division's processing of the Preliminary Short Subdivision application is on hold until these issues are resolved. Please provide materials addressing the above comments within 60 days of this letter. Pursuant to MICC 19.15.110(B), if the applicant fails to provide the required information within 60 days from the date of this notice, the code official may cancel the land use review for inactivity if no extension has been authorized. Please feel free to contact me at 206-275-7720 or via e-mail at andrew.leon@mercerisland.gov if you have any questions.

Sincerely,



Andrew Leon, Planner
City of Mercer Island Community Planning and Development
andrew.leon@mercergov.org
(206) 275-7720

Comments to application for preliminary short subdivision to divide into 4 lots.

File number: SUB22-009

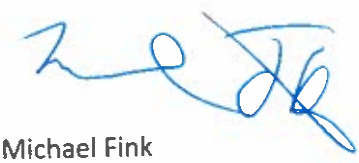
Permit Type: III

Applicant Jintao (Adison) Cui/ Home-Link Capital LLC

Property: 4833 90th Ave SE, Mercer Island

My name is Michael Fink. I am a lawyer and have lived at 9012 SE 50th Street, Mercer Island since 1996. I walk past this property almost every day. There are a number of beautiful large trees on this property including a couple of Madronas which are not that common on Mercer Island. The trees on the property also act as a wind break coming off from the west to the houses that are east of the property. While I have no issue with the property being subdivided and built on, I, as well as several other neighbors that I have spoken with, would like to see the City strongly enforce its tree ordinance and not allow the developer to take out any more trees than are absolutely necessary. Homes on Mercer Island should be built in harmony with the existing landscape as much as possible. Allowing a developer to clear cut a lot because it is cheaper for them is not a good enough reason.

Thank you for your consideration.



Michael Fink

Andrew Leon

From: Veronika Ziegler <veronika.ziegler@gmail.com>
Sent: Wednesday, February 8, 2023 1:59 PM
To: Andrew Leon
Subject: SUB22-009

Dear Mr. Leon,

I am writing regarding the Revised Public Notice of Application for file no. SUB22-009. As property owners on the north-east side of the property, we want to express concern regarding the proposed development, specifically in regard to the proposed removal of trees 3 and 4, the placement of utility lines along the north of the property, and the potential impact of those actions upon adjacent trees on our property which we believe will be negatively impacted by the proposed development.

Trees 3 (a Large Regulated Bigleaf Maple) and 4 (an Exceptional Douglas Fir) are closely planted to three trees that border our property (these include trees 1 and 2 on the planning documents, as well as a smaller, unnumbered tree also shown on the documents). The submitted planning documents show the driplines and critical root zones of our trees in the plan, as these extend over the subject property lines. We are concerned that the water and sewer lines will impact the critical root zones of our trees, and affect the safety and continued viability of our trees. Removal of trees 3 and 4, which have grown to share a canopy with our trees, may further accelerate decline in our trees. Tree 4 is a dominant tree in the canopy and currently provides a barrier against wind. We are worried that the combined impact of disturbance to the critical root zones below, as well as removal of support trees above, may cause our trees to need removal or pose a hazard.

We would welcome insight into how concerns such as these are handled by the city. Thank you.

Sincerely,

Veronika Ziegler and Jeremy Ung
4815 90th Ave SE
Mercer Island, WA 98040

Andrew Leon

From: KeithandKaren Chan <keithandkaren@gmail.com>
Sent: Wednesday, February 8, 2023 2:36 PM
To: Andrew Leon
Subject: Comments for SUB22-009

Hi Andrew,

We live in the mid-Mercer Island area and want to voice concerns regarding the application for 4833 90th Ave SE:

1. The number of trees cut is shocking. The arborist report indicated >60% of the trees are viable and with good vitality, with over 53 on-site trees included. However, 32 of these are to be cut, including many which are considered protected trees under the definition of MICC 19.10.005. Cutting these trees completely change the naturesque appeal of mid-Mercer Island. We do not want the neighborhood to turn into a dense north-island look and request the application to keep additional trees along the north and east perimeter to improve the appearance in the neighborhood. For example, trees #10, 13, 3, 4, 5, 21, 24, 25, 67 and 68 should remain to conform to the appearance of the surrounding neighborhood, and some of these trees are considered Large-Regulated or Exceptional.

2. The lot is quite small for the planned subdivision, the result of which will be the addition of a 3rd development of a closely-packed cluster of 4 homes, next to two other similar developments. This is changing the mid-Mercer Island neighborhood into a semi-urban density that is significantly more packed together than the rest of the neighborhood. This proposal goes against the sort of environment and feel that we want; Mercer Island should not have the same density as Bellevue or Seattle.

3. We are concerned about the height of the new buildings. Is there going to be a limit on the building height such that it conforms to the surrounding homes?

Thank you,
Keith

COMMUNITY PLANNING & DEVELOPMENT
206.275.7605
www.mercerisland.gov/cpd

June 5, 2023

Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th St, 3186
Mercer Island, WA 98040

RE: SUB22-009 (Cui Preliminary Short Subdivision)
REVISED Request for Information #1
4833 90th Ave SE

Dear Jintao (Adison) Cui:

The City of Mercer Island Community Planning and Development Department has performed a review for compliance with the zoning code, Title 19 of the Mercer Island City Code (MICC) for the above-referenced Preliminary Short Subdivision application. The following issues need to be addressed before we can continue processing the application. This Revised Request for Information supersedes the Request for Information sent by the city on April 6, 2023.

General:

1. When resubmitting, provide a response letter to address each review comment. Please also state where the proposed changes can be found (i.e. sheet number, document name, etc.). When the City receives your resubmittal, we will review it to determine if the materials provided represent a complete resubmission. Failure to address any item listed in this letter shall constitute an incomplete resubmission.

2. The applicant bears the burden of proof that the proposed project is consistent with all laws, standards, and requirements provided in the MICC. The City does not defend the legitimacy of an application. It is up to the applicant to provide the City with enough information to determine if the proposal is consistent with the provisions of the MICC or not.

3. Emails or letters containing application documents, plans, and studies directed to staff are not resubmittals. All resubmittal documents, plans, and studies shall be uploaded electronically to the SFTP website. There are no exceptions to this requirement.

4. When resubmitting electronically to the SFTP website, please make it clear in the file name that the resubmittal is for all associated land use applications and notify the Permitting Staff at epermittech@mercerisland.gov.

5. The City received several comment letters from neighbors about this proposal. Please review the attached comment letters and provide a response to the neighbors' concerns. All public comments received during the public comment period shall be

addressed by the applicant. The applicant shall respond to all comments in writing and provide a copy of the communication to the city to include in the case record.

6. Please remove Sheet C-1.1 from the plan set.

Planning:

1. Provide a revised project narrative that describes how the proposal meets all relevant code sections in the city's subdivision code. In particular, provide an itemized list that addresses the following sections:

   - MICC 19.08.020(D)(1), Findings of fact.
   - MICC 19.08.030, Design standards, subsections (B) through (E).

2. Provide more information about the provisions this short subdivision is proposing for public health, safety, and general welfare. Such information includes provisions for:

   - Open space.
   - Drainage ways, potable water supplies, and sanitary waste.
   - Streets, roads, alleys, other public ways, and transit stops.
   - Parks and recreation, including playgrounds.
   - Schools and schoolgrounds.

3. Describe whether the public use and interest will be served by this proposal. Also describe how the proposed short subdivision conforms to applicable zoning and land use regulations.

4. Show how building pads for Parcels 1 through 4 that are consistent with the requirements of MICC 19.09.090:

   - The building pad shall be located to minimize or prevent impacts as indicated in the following:
     - Removal of trees and vegetation required for retention pursuant to Chapter 19.10 MICC shall be prevented.
     - Disturbance of the existing, natural topography as a result of anticipated development within the building pad shall be minimized.
     - Impacts to critical areas and critical area buffers shall be minimized, consistent with the provisions of Chapter 19.07 MICC.
     - Access to the building pad shall be consistent with the standards contained in MICC 19.09.040.
   - Building pads shall not be located within:
     - Required front, rear, or side yard setbacks.
     - Streets or rights-of-way.
     - Critical areas, buffers, or critical area setbacks. Building pads may be located within geologically hazardous areas and associated buffers when all of the criteria listed in MICC 19.09.090(A)(2)(c)(i) through (iii) are met.

   The building pads must be designed to exclude the driplines of trees required to be retained under the provisions of Chapter 19.10 MICC.

5. The applicant shall provide an analysis of school bus stops or sate walking routes to schools. The applicant shall coordinate with the school district on bus stop locations that will serve the proposed development. The applicant shall provide the analysis and approval from the school district at the next submittal.

6. MICC 19.08.030(E)(4) and MICC 19.09.100(A) require development proposals to use common utility corridors where feasible. The site plan shows that each of the lots of the proposed short subdivision will have its own utility corridor. Revise the location of the utilities so they use a common utility corridor. Alternatively, provide documentation showing how using a common utility corridor is infeasible for this proposal.

Civil Engineering:

1. Provide a plat map that shows only bearings/distances, easements, and legal descriptions. The plat map must be tied to at least two known city monuments.

2. The private drainage pipe on Island Crest Way (Item 13 on Sheet C-6.0) should not be located in the public right-of-way. The drainage connection from the new development shall be perpendicularly connected to the existing City catch basin #27a-234 to minimize impacts to the public right-of-way.

3. The existing drainage ditch along the frontage of 90th Ave SE shall be piped as a part of the plat improvements.

4. Add the following note to Sheet C-6.0:

   "The utility design (water, sewer, and storm) shown on Sheet C-6.0 is conceptual only. The basic layout and conceptual design of the utility design will be reviewed under this short plat application. The detailed design has not been reviewed for construction. All design related to water, sewer, storm and roadway are not approved and will be reviewed under a separate permit."

For questions about civil engineering requirements, contact Ruji Ding, Senior Development Engineer, at ruji.ding@mercerisland.gov or at 206-275-7703.

Fire:

1. Add the following note to the face of the plat:

   "All building permits are subject to meeting current fire code requirements at the time of a complete submittal, including fire apparatus access as outlined in adopted code sections of the International Fire Code Appendix D. Fire plan reviews will be conducted at time of building permit submittal and may require additional fire protection systems and/or additional fire prevention measures for building permit approval."

For questions about fire requirements, contact Jeromy Hicks, Fire Marshal, at jeromy.hicks@mercerisland.gov or at 206-794-2512.

Arborist

1. A description of how the tree retention requirements set forth in MICC 19.10.060(A)(2) is required.

2. Trees numbered 6, 14, and 23 were previously cut down without a permit. Please provide the reason for their removal. Please provide the diameter of the trees at 4.5 feet or a stump diameter. Appraisal for the value of trees 6, 14, and 23 is required even if the appraisal is retroactive with only the stump left. Sheet C-2.1 refers to tree 6 in poor condition, but the arborist report does not. The arborist shall determine the viability of trees. Please update the plan set and arborist report. Include trees 6, 14, and 23 in the tree inventory worksheet calculation if they were removed in the last five years.

3. Tree 36 is shown for retention on the plans but is listed as removed in the Tree Inventory. The plans and the Tree Inventory must match. Please confirm that this is the case for all trees. Please see this link for the Tree Inventory and Replacement Submittal Information form.

4. Replacement is required for any trees that are removed according to the replacement ratios set forth in MICC 19.10.070. It appears that most of the property is an exceptional grove. All exceptional trees and exceptional grove trees (even those below 24 inches) must be replaced with six trees. At least half of the trees need to be native to the Pacific Northwest (please see this Native Plant Guide for more information). The trees need to be at least 10 feet apart from each other, structures, fences, and utilities. A fee in lieu of replanting is available upon request after retention requirements are met. A tree watering plan must also be submitted to ensure the trees survive long-term.

5. Please update the tree report with designation of trees being a part of an exceptional grove according to the following definition: "*Tree, grove:* A grove means a group of eight or more trees each ten inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree."

6. Several exceptional trees are on site and must be retained and protected at arborist-provided tree protection zones unless the removal is justified under MICC 19.10.060(A)(3). It appears that most of the property is an exceptional grove. The removal of any exceptional trees must be justified under MICC 19.1.0600(A)(3). Trees 26, 27, 33, 55, and 63 are all exceptional, over 24 inches, and in at least fair condition. These trees should be prioritized for protection unless their removal is justified. This exceptional grove information must be provided by the arborist.

7. The following trees are shown as retained but not protected at their dripline: 3, 4, 5, 9, 10, 11, 23, 36, 56, 62, 65, 66, and 69. All retained trees must be protected under MICC 19.10.080 in such a way that they will not be damaged and will remain viable long term. The project arborist must address this code section when encroachment into driplines is proposed. The trees would be considered removed because of root damage. Please update the Tree Submittal Checklist according to MICC 19.10.090. After the limits of allowable disturbance are determined by the project arborist, these limits must be included on the tree protection plan. Any excavation within the driplines of exceptional trees or other trees required to be retained must be concluded not to damage the trees.

This will require advanced root analysis air excavation under arborist supervision. The limits of allowable disturbance must be confirmed to locate the building pads. A preliminary civil plan with access and utilities should be created to confirm trees proposed for retention can indeed be protected.

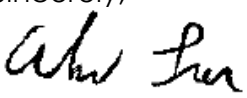
For questions about tree requirements, please contact John Kenney, City Arborist, at john.kenney@mercerisland.gov or at 206-275-7713.

With your resubmittal, provide a cover letter responding to each of the items above. Please reference page/sheet numbers noting where the requested information can be found. An incomplete resubmittal may delay your project.

The Planning Division's processing of the Preliminary Short Subdivision application is on hold until these issues are resolved. Please provide materials addressing the above comments within 60 days of this letter. Pursuant to MICC 19.15.110(B), if the applicant fails to provide the required information within 60 days from the date of this notice, the code official may cancel the land use review for inactivity if no extension has been authorized. No additional notification regarding this deadline or expiration of the application will be provided.

Please feel free to contact me at 206-275-7720 or via e-mail at andrew.leon@mercerisland.gov if you have any questions.

Sincerely,



Andrew Leon, Planner
City of Mercer Island Community Planning and Development
andrew.leon@mercergov.org
(206) 275-7720

cc: SUB22-009 File;
Jeff Thomas, Director; and
Ryan Harriman, Planning Manager.

COMMUNITY PLANNING & DEVELOPMENT
206.275.7605
www.mercerisland.gov/cpd

October 25, 2023

Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th St, 3186
Mercer Island, WA 98040

RE: SUB22-009 (Cui Preliminary Short Subdivision)
Request for Information #2
4833 90th Ave SE

Dear Jintao (Adison) Cui:

The City of Mercer Island Community Planning and Development Department has performed a review for compliance with the zoning code, Title 19 of the Mercer Island City Code (MICC) for the above-referenced Preliminary Short Subdivision application. The following issues need to be addressed before we can continue processing of the application:

Planning:

1. Please provide updated building pads based on the review comments from the City Arborist below.

Arborist

1. Please provide an updated Tree Inventory Worksheet that matches the arborist report and plan set. All regulated trees over 10 inches in diameter, including non-viable trees, need to be counted in the total number of trees. 30% of the total number of trees greater than 10 inches in diameter must be retained.

2. Please show an X through all trees proposed to be removed on the site plan. It is hard to see which trees are proposed to be removed on the current plan set. Marking each removed tree with an X will avoid mistakes during the site clearing phase.

3. Please provide the following information for the exceptional trees numbered 26, 27, 33, and 55. Justification for the removal of these exceptional trees under MICC 19.10.060(A)(3) will be required. It is not sufficient to simply state an exceptional tree would prevent the creation of a lot.
   - You will be required to save 30% of all large regulated trees, and any exceptional trees over 24 inches in diameter. Please provide a plan with these trees indicated along with their driplines as determined by the project arborist.
   - Please show different options for lot line placements that retain the most exceptional trees or the exceptional trees most suitable for retention.
   - Determine the allowed setbacks and maximum gross floor area for each lot and configure the building pad to best avoid any exceptional trees and retain 30% of

large trees. You may need to modify the rectangular building pads to accommodate exceptional tree driplines.

- Please include an updated narrative and plan showing that you have followed the above steps. You may only remove an exceptional tree after this exercise takes place and you find that retaining the tree would limit the constructible gross floor area of a lot to less than 85% of the maximum gross floor area allowed in the zone.

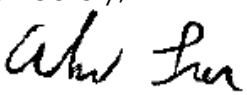
4. The following trees are shown as retained, but not protected at their driplines: 3, 4, 5, 36, and 69. All retained trees must be protected in such a way that they will not be damaged and will remain viable long term. The trees may be considered removed if too many roots are damaged. Air excavation root analysis or other noninvasive techniques approved by the project shall be performed before any building pad location is approved. After the limits of allowable disturbance are determined by the project arborist, these limits must be included in the tree protection plan. Any excavation within the driplines of exceptional trees or other trees required for retention can only be performed if they will not be damaged as per MICC 19.10.080. The project arborist must discuss this code and the long-term viability/stability of the trees after the proposed excavation within the dripline area.

For questions about tree requirements, please contact John Kenney, City Arborist, at john.kenney@mercerisland.gov or at 206-275-7713.

With your resubmittal, please provide a cover letter responding to each of the items above. Please reference page/sheet numbers noting where the requested information can be found. An incomplete resubmittal may delay your project.

The Planning Division's processing of the Preliminary Short Subdivision application is on hold until these issues are resolved. Please provide materials addressing the above comments within 60 days of this letter. Pursuant to MICC 19.15.110(B), if the applicant fails to provide the required information within 60 days from the date of this notice, the code official may cancel the land use review for inactivity if no extension has been authorized. Please feel free to contact me at 206-275-7720 or via e-mail at andrew.leon@mercerisland.gov if you have any questions.

Sincerely,



Andrew Leon, Planner
City of Mercer Island Community Planning and Development
andrew.leon@mercergov.org
(206) 275-7720

COMMUNITY PLANNING & DEVELOPMENT
206.275.7605
www.mercerisland.gov/cpd

December 29, 2023

Jintao (Adison) Cui
Home-Link Capital LLC
7683 SE 27th St, 3186
Mercer Island, WA 98040

RE: SUB22-009 (Cui Preliminary Short Subdivision)
Request for Information #3
4833 90th Ave SE

Dear Jintao (Adison) Cui:

The City of Mercer Island Community Planning and Development Department has performed a review for compliance with the zoning code, Title 19 of the Mercer Island City Code (MICC) for the above-referenced Preliminary Short Subdivision application. Please note that Andrew Leon is no longer with the City of Mercer Island, and I will be taking this project over. The following issues need to be addressed before we can continue processing of the application:

Planning:

1. Please confirm that the building envelopes shown in the plan set are the building pads proposed for this project. These building pads appear to be the footprints of future planned houses. The building pads must be designed to be located outside of required setbacks, as well as at least five feet away from required protection for retained trees. They do not need to be limited to the footprints of planned buildings. If these building pads are recorded as shown, any changes to their dimensions will require a short plat amendment.

Arborist

1. The tree protection fencing needs to match on all the plan sheets. Sheet TR-01 and sheet C-5.0. need to match with the arborist recommendations.

2. (repeat comment for civil/arborist) Tree 55 is a viable exceptional tree over 24 inches in diameter proposed for removal. Please speak to the code for justification of the removal of viable trees according to MICC19.10.060(A)(3). Discuss and show in a diagram how if you protect the tree, you would not be able to obtain at least 85% of your maximum gross floor area. If this is the section of code you think best describes the reason for removing this tree.

3. Trees 7, 57, 61, 62, 65 are listed on tree inventory worksheet as large regulated trees but are non-regulated since they are below 10 inches in diameter and do not become

exceptional at that size. This will impact your percentage of trees to be retained. These trees are not required to be replaced since they are non-regulated.

For questions about tree requirements, please contact John Kenney, City Arborist, at john.kenney@mercerisland.gov or at 206-275-7713.

With your resubmittal, please provide a cover letter responding to each of the items above. Please reference page/sheet numbers noting where the requested information can be found. An incomplete resubmittal may delay your project.

The Planning Division's processing of the Preliminary Short Subdivision application is on hold until these issues are resolved. Please provide materials addressing the above comments within 60 days of this letter. Pursuant to MICC 19.15.110(B), if the applicant fails to provide the required information within 60 days from the date of this notice, the code official may cancel the land use review for inactivity if no extension has been authorized.

Please feel free to contact me at 206-275-7717 or at ryan.harriman@mercerisland.gov if you have any questions.

Best regards,

Ryan Harriman

Ryan Harriman, EMPA, AICP – Planning Manager
City of Mercer Island Community Planning and Development

PACIFIC LAND ENGINEERING
Civil Engineering . Land Use Consulting . Development Design
Utilities Design . Permit Expediting . Construction Inspection

RESIDENTIAL ◆ COMMERCIAL ◆ GOVERNMENT
Bellevue, WA 98005 ◆ (425) 615 – 6160
info@pacificlandwa.com

December 20, 2022

Andrew Leon, Planner
City of Mercer Island
Community Planning and Development
9611 SE 36th Street
Mercer Island, WA 98040

RE: Notice of Incomplete Application for File No. SUB22-008

With respect to your notice of incomplete application for file number SUB22-008 dated November 30th, 2022 we are submitting the below specific responses:

Planning

Review Comments,

MICC 19.08.020(C)(3) states that complete applications for Preliminary Short Subdivisions must include a plat certificate (title report) dated not more than 30 days before the filing date of the application. The title report provided with the application is dated October 3, 2022, which is more than 30 days before the date of application (November 16, 2022). Please provide an updated title report dated no more than 30 days before the date of application.

Response,

Attached is a copy of most recent Title Report issued within the last two weeks.

Trees

Review Comments,

MICC 19.19.060(A)(2)(a) requires retention of 30% of trees on the site with a diameter of 10 inches or greater. Additionally, development must be designed to minimize tree removal. The project cannot be approved unless the tree retention requirements are met.

Response,

Consistent with MICC 19.19.060(A)(2)(a) and utilizing Arborist Report dated April 20th, 2022 prepared by Thomas Hanson of ARBOR INFO LLC, we are attaching revised Tree Tables Plan C-2.1 and Trees Retention Plan C-3.0 for city review. These plans will show total of 69 trees surveyed by the project surveyor and referenced in the Arborist Report, out of the 69 existing trees there 26 trees that are considered unregulated trees with DBH < 10" and/or trees that are in poor conditions as referenced in the Arborist Report. This leaves total 43 viable existing trees which include regulated trees with DHB > 10" plus trees that are fair / good conditions.

The attached plan sheets will show total 32 trees proposed to be removed to make room for the construction of proposed 4 houses, proposed 4 individual driveways, proposed on-site access road, proposed water and sewer connections, and proposed on-site storm water retention / detention (R/D) system with associated storm conveyance system.

Out of 32 trees there are 8 trees that are unregulated with DBH < 10" and/or in poor conditions as referenced in the Arborist Report, leaving 24 viable trees to be removed, this means percentage of actual viable trees to be retained is 43 – 24 = 19 ⇨ (19 / 43) X 100 = 44.2 % exceeding the minimum 30% of required trees to be retained. Please refer to attached Civil Plans sheets C-2.1 and C-3.0, to attached Table – A (unregulated + poor conditions trees) and to Table – B (viable trees to be removed).

Additionally, consistent with the referenced Arborist Report, there are 14 existing trees with DBH of 24" and greater that are considered Exceptional Trees per MICC 19.10.070, out of which 5 trees will be retained a percentage of 30.8 %, please refer to attached Table – C and to attached Civil Plans for additional information and clarification.

To protect trees to be retained we proposed the specific techniques to be utilized during the construction of the proposed 4 lot short plat, these techniques include but not limited to:

1. Air Brush Shovel to locate the tree's root zones.
2. Installation of 6' tree protection fence around the tree's drip/root line.
3. Tunneling instead of trenching for utilities installation.
4. Hand excavation instead of machine excavation for proposed houses foundation.
5. Stump grinding instead of stump pulling.
6. Long tree branches will be trimmed just enough to accommodate permitted house height.
7. Routing of construction traffic asway from retained tree root areas to prevent soils compaction.

Review Comments,

The provided Tree Inventory Worksheet is incomplete. Please submit an updated Tree Inventory Worksheet that is fully filled out. Since the site is currently considered one lot, please submit one Tree Inventory Worksheet for the project.

Response,

Please refer to attached completed Tree Inventory Worksheets, this sheet will show number of existing trees, number of trees to be cut, number of trees to be retained, and percentage of trees to be retained 44.2% consistent with MICC 19.19.060(A)(2)(a).

Review Comments,

Replacement is required for any trees that are removed, as per the replacement ratios in MICC 19.10.070. It appears that most of the property is an exceptional grove. All exceptional trees must be replaced with six trees. At least half of the replacement trees need to be native to the Pacific Northwest (see the Native Plant Guide for Western Washington Yards). The replacement trees must be at least 10 feet apart from each other, structures, fences, and utilities. If you can demonstrate that no room exists on site for all required replacement trees, you can request that the remainder can be a fee in lieu. A tree watering plan must also be submitted to ensure that the trees survive long term.

Response,

The attached completed Tree Inventory Worksheets will show number of required replacement trees which will be shown on construction plans and will be planted to maximum extent possible consistent with MICC 19.10.070.

Review Comments,

This site contains several exceptional trees. Any exceptional trees with trunk diameters over 24 inches must be retained and protected at arborist given protections zones unless their removal is justified under MICC 19.10.060(A)(3).

Response,

The attached revised Civil Plans, the attached Table – C, and attached Tree Inventory Worksheets will show 14 existing exceptional trees with DBH > 24" as surveyed and referenced in the Arborist Report, and will show 5 exceptional trees to be retained, and required replacement trees which will be shown on construction plans and will be planted to maximum extent possible consistent with MICC 19.10.070.

We trust the above responses are sufficient to address the city review comments as requested, and in the meantime, please let us know if you have any questions or need additional information to complete and approved your review for the subject proposed 4 lot short plat application.

Sincerely,

Mazen Haidar, PE
Pcific Land Engineering.

Attachment,

Cc: Jintao (Adison) Cui, Project Owner.

Table - A			
Existing Unregulated Trees (less than 10" DBH)			Trees in Poor Conditions
Tag #	Tree #	DBH	
762	7	7.5"	
881	38	7.1"	
885	40	7.5 "	
867	42	6.5"	
887	43	9.6"	
755	6	10"	X
991	57	6.4"	
1001	58	9.5"	X
1002	59	9.2"	X
1004	61	8.5"	X
1005	62	8.5"	
1007	64	8.5"	X
1008	65	6.1"	
837	17	8.4"	
964	44	5.0"	
965	45	7.2"	
966	46	5.0"	
891	48	6.8"	X
868	51	11.1"	X
890	47	10.3"	X
742	22	12.2"	X
836	16	17.5"	X
789	15	14.5"	X
778	11	11.9"	X
767	9	12.9"	X
763	8	12.1"	X
Total = 26 Tree			

Table - B				
Existing Vialbe Trees To Be Removed Regulated (BDH > 10") and in Fair / Good Condition				
Tag #	**Tree #**	**DBH**	**Condition**	**Exceptinal**
604	25	19.6"	GOOD	
603	24	23.5"	GOOD	
628	26	38.6"	GOOD	X
631	35	31.6"	FAIR	X
633	34	25.1"	FAIR	X
634	33	28.1"	GOOD	X
632	36	19.4"	GOOD	
635	55	32.0"	GOOD	X
786	12	18.9"	FAIR	
787	13	19.5"	GOOD	
1010	67	15.6"	GOOD	
1006	63	25.2"	GOOD	X
851	21	21.2"	GOOD	
850	20	12.7"	GOOD	
849	19	19.6"	GOOD	
854	27	32.9"	GOOD	X
844	31	15.5"	GOOD	
847	29	10.4"	FAIR	
846	30	20.0"	GOOD	
855	28	39.1"	GOOD	X
856	32	28.3"	GOOD	X
865	37	17.6"	GOOD	
882	52	21.9"	GOOD	
898	54	13.9"	GOOD	
Total Viable Trees to Be Removed = 24 Tree				

Table - C			
Existing Exceptional Trees (DBH > 24")			
Tag #	**Tree #**	**DBH**	**Exceptional Trees To Remain**
571	4	41.5"	X
768	10	28.7"	X
628	26	38.6"	
854	27	32.9"	
855	28	39.1"	
856	32	28.3"	
634	33	28.1"	
633	34	25.1"	
631	35	31.6"	
833	50	26.1"	X
635	55	32.0"	X
637	56	36.9"	
1006	63	25.2"	
568	2	25.5"	X
Total = 14 Tree			**Total = 5 Tree**

KTC KARR TUTTLE CAMPBELL

Jacque E. St. Romain
Attorney at Law
701 Fifth Avenue, Suite 3300
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Direct: (206) 224 8089
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September 1, 2023

VIA US MAIL AND E-MAIL
Andrew Leon, Planner
City of Mercer Island Community Planning and Development
9611 SE 36th Street
Mercer Island, WA 98040
andrew.leon@mercergov.org

RE: SUB22-009 (Cui Preliminary Short Subdivision)
REVISED Request for Information #1
4833 90th Ave SE

Mr. Leon,

I represent Home Link Capital LLC (the "Applicant"), the owner and developer of the property located at 4833 90th Ave SE, Mercer Island, Washington (the "Property") with respect to their Preliminary Short Subdivision application (the "Application"). I am in receipt of your REVISED Request for Information #1 dated June 5, 2023 (the "Review Letter").

We appreciate your second review as it has clarified where additional information is actually needed. The Applicant has gone through the comments and provided updated information to address the issues you identified in the Review Letter, including submitting revised civil plans, a revised project narrative, and responses to your Review Letter. This response is primarily intended to address the arborist comments and the comments received from the neighbors.

The Applicant has retained a new arborist, Cascara Tree Consulting ("Cascara"). Cascara has provided a written response to the arborist comments in the Review Letter (the "Arborist Response to City Review Comments"), and has also provided an Arborist Report, a Tree Retention Plan and a Tree Planting Plan. From your review of these documents, it will be evident that the Applicant has satisfied the Mercer Island City Code ("Code") requirements related to the retention and replacement of trees.

This should further be evidenced by the following responses to the public comments received from the neighbors:

First, you provided a copy of comments received from Michael Fink. Mr. Fink stated he had no issue with the property being subdivided and built on but asked the City to "enforce its tree ordinance" and "not allow the developer to take any more trees than are absolutely necessary." As is demonstrated by the Arborist Report, Tree Retention Plan and Tree Planting Plan, the Applicant

seeks to only remove those trees necessary for the development and the applications are in compliance with the City's Code provisions related to trees.

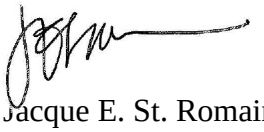
Second, you provided a copy of comments received from Veronika Ziegler. Ms. Ziegler expressed concern that the removal of Trees 3 and 4 on the Property may potentially cause some harm to some trees that are located nearby on her property and also expressed concern about the location of utility lines along the north of the Property. The Applicant must comply with utility provider requirements for utility lines and the location is dictated by those constraints. But, as is evident from the Tree Retention Plan provided herewith, Trees 3 and 4 will be retained. This satisfies Ms. Ziegler's request.

Finally, you provided a copy of comments received from Keith Chan. Mr. Chan requested that the Applicant retain Trees 10, 13, 3, 4, 5, 21, 24, 25, 67 and 68, in order to "conform to the appearance of the surrounding neighborhood." He also stated that he did not want Mercer Island to have "the same density as Bellevue or Seattle" and wanted to know if there was going to be a limit on building height. Because the City adopted code provisions allowing the type of density proposed by the Applicant, the Applicant must be allowed to subdivide and develop its property, even if neighbors would prefer less density. The Applicant will abide by the Code provisions related to density and height. With respect to the specific trees identified by Mr. Chan, Trees 3, 4 and 5 are being retained. As identified in the Arborist Report, Trees 13, 21, 25, and 67 are not viable trees. Thus, they cannot be kept by the Applicant. Of the trees identified by Mr. Chan, this leaves only Trees 10, 24, and 68 as viable trees that are being removed. Tree 10 is not an exceptional tree, is covered in ivy, and is being removed because of its size and its proximity to the houses being constructed on lots 1 and 3. Tree 24 is also not an exceptional tree and is located too close to the house to be constructed on Lot 3. Removing this tree is necessary to allow a house to be built on that property given the set back requirements. Finally, Tree 68 is an exceptional tree, but the trunk of Tree 67 (a non-viable tree) is growing so that it is touching and wrapping around the trunk of Tree 68. Retaining Tree 68 may not be possible when Tree 67 is removed. Further, Tree 68 is in the location where the house is planned to be located on Lot 1. The house footprint on Lot 1 cannot feasibly shift west to accommodate Tree 68 without impacting the slope along Island Crest Way.

The Code contemplates allowing an applicant to remove trees. Specifically, MICC 19.10.010(C) states only that an application is required for approval to remove trees as part of a development and that a minimum of 30% of trees will need to be retained. The Applicant is in compliance with this requirement, retaining 45% (10 of 22) of the viable trees on the Property. Further, while exceptional trees should be retained if possible, the Code recognizes that not all exceptional trees will be able to remain. The Applicant is conscious of the desire to have a lot of trees in the area to retain the feel of the neighborhood. For this reason, the Applicant plans to install 90 replacement trees over the Property. This will end with a net result of more trees on the Property, not less. Overall, the Applicant's plans are in compliance with the Code requirements and the Applicant is entitled to remove Trees 10, 24 and 68.

Thank you in advance for your consideration of the information submitted in response to your Review Letter. We look forward to receiving a timely response to this letter and confirmation from all departments (particularly planning, fire and civil) that the plans, as proposed, are preliminarily approved so that the Applicant can proceed with preparing the next documents needed for the entitlement process. Should you have any questions, please do not hesitate to reach out to me at the contact information provided above.

Best regards,



Jacque E. St. Romain

CASCARA TREE CONSULTING
ARBORIST RESPONSE TO CITY REVIEW COMMENTS

TO:	Mr. Jintao (Addison) Cui
REFERENCE:	Arborist Response to City Review Comments RE: SUB22-009 (Cui Preliminary Short Subdivision)
SITE ADDRESS:	4833 90th Ave SE, Mercer Island, WA
DATE:	8/9/2023
PREPARED BY:	Katie Hogan, ISA Certified Arborist PN-8078A ISA Tree Risk Assessment Qualified

This report also addresses the City of Mercer Island's comments dated June 5th, 2023:

1. *A description of how the tree retention requirements set forth in MICC 19.10.060(A)(2) is required.*
    a. **This project proposes to retain 10 viable trees of the 22 viable trees on the site for a total of 45% tree retention. Of the 12 viable Exceptional trees, 5 are proposed for retention. The additional 7 Exceptional trees are requested for removal due to meeting the criteria in MICC 19.10.060(A)(3). For a complete explanation and discussion of how this project meets the required tree retention standards, see the Arborist Report titled "Arborist-Report_4833-90th-Ave-SE_08.04.2023".**

2. *Trees numbered 6, 14, and 23 were previously cut down without a permit. Please provide the reason for their removal. Please provide the diameter of the trees at 4.5 or a stump diameter. Appraisal for the value of trees 6, 14, and 23 is required even if the appraisal is retroactive with only the stump left. Sheet C-2.1 refers to tree 6 in poor condition, but the arborist report does not. The arborist shall determine the viability of the trees. Please update the plan set and arborist report. Include trees 6, 14, and 23 in the tree inventory worksheet calculation if they were removed in the last five years.*
    a. **Response: Tree #s 6, 14, and 23 were assessed as being in poor condition and potentially hazardous at the time of removal. A detailed analysis of the remaining tree parts, Google imagery, and real estate photographs was used to reach this conclusion. For detailed information, including an appraisal valuation, see the separate report titled "Tree-Removal-Assessment_4833-90th-Ave-SE_07.17.2023".**

3. *Tree 36 is shown for retention on the plans but is listed as removed in the Tree Inventory. The plans and the Tree Inventory must match. Please confirm that this is the case for all trees.*
    a. **Response: Tree #36 is proposed for retention and protection. See Tree Retention Plan for more information.**

4. *Replacement is required for any trees that are removed according to the replacement ratios set forth in MICC 19.10.070. It appears that most of the property is an exceptional grove. All exceptional trees and exceptional grove trees (even those below 24 inches) must be replaced with six trees. At least half of the trees need to be native to the Pacific Northwest (please see this Native Plant Guide for more information). The trees need to be at least 10 feet apart from each other, structures, fences, and utilities. A fee in lieu of replanting is available upon request after retention requirements are met. A tree watering plan must also be submitted to ensure the trees survive long-term.*
    a. **Response: This project proposed to replant 90 trees, 52 of which are native tree species. See Tree Planting Plan for more details.**

5. *Please update the tree report with designation of trees being a part of an exceptional grove according to the following definition: "Tree, grove: A grove means a group of eight or more trees each ten inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree."*
    a. **Response: Due to the declining condition of many of the trees on this lot, there are no contiguous areas of viable trees that meet this definition of a Grove on the site. See pages 6 to 8 of the Arborist Report titled "Arborist-Report_4833-90th-Ave-SE_08.04.2023".**

6. *Several exceptional trees are on site and must be retained and protected at arborist-provided tree protection zones unless the removal is justified under MICC 19.10.060(A)(3). It appears that most of the property is an exceptional grove. The removal of any exceptional trees must be justified under MICC 19.1.0600(A)(3). Trees 26, 27, 33, 55, and 63 are all exceptional, over 24 inches, and in at least fair condition. These trees should be prioritized for protection unless their removal is justified. This exceptional grove information must be provided by the arborist.*
    a. **Response: There are 23 total trees that meet the Exceptional size criteria. Of those trees, 12 are in viable condition (i.e., are in good to fair health and/or structural condition). The additional 11 trees were in a state of decline or had substantial structural defects and were determined to be in poor health and/or structural condition. For complete information on each non-viable Exceptional tree, please refer to the Arborist Report titled "Arborist-Report_4833-90th-Ave-SE_08.04.2023" and the included Tree Inventory Table.**
    b. **As mentioned under comment #5, there are no Exceptional groves on the site due to the declining condition of the trees.**

7. *The following trees are shown as retained but not protected at their dripline: 3, 4, 5, 9, 10, 11, 23, 36, 56, 62, 65, 66, and 69. All retained trees must be protected under MICC 19.10.080 in such a way that they will not be damaged and will remain viable long term. The project arborist must address this code section when encroachment into driplines is proposed. The trees would be considered removed because of root damage. Please update the Tree Submittal Checklist according to MICC*

19.10.090. After the limits of allowable disturbance are determined by the project arborist, these limits must be included on the tree protection plan. Any excavation within the driplines of exceptional trees or other trees required to be retained must be concluded not to damage the trees. This will require advanced root analysis air excavation under arborist supervision. The limits of allowable disturbance must be confirmed to locate the building pads. A preliminary civil plan with access and utilities should be created to confirm trees proposed for retention can indeed be protected.

a. **Response: 10 viable trees are proposed for retention on the site (#s 3, 4, 5, 36, 40, 41, 43, 49, 50, 69). Please refer to the table below, Tree Retention Plan, and Arborist Report titled "Arborist-Report_4833-90th-Ave-SE_08.04.2023" for complete tree protection specifications and recommendations.**

Proposed Impact / Tree Numbers	Specifications
General – all retained trees	1. Tree Protection Fence: shall be installed as shown on the Tree Protection Plan and consist of 6-foot tall chain-link fencing. Fencing shall be installed on concrete footings and securely attached by clamping the panels together. 2. Tree Protection Signage: plastic laminate signs shall be affixed to the fencing in 15 foot intervals using zip ties or wire stating "Tree Protection Area – Keep Out". 3. No work, excavation, trenching, material storage, cleaning or dumping shall occur behind the tree fencing. 4. All invasive and other vegetation removed within the driplines of the trees shall be done mainly by hand or using small machinery only. 5. Under no circumstances shall the grade be lowered within the Tree Protection Fencing area.
Tree #s 3, 4, 5 Construction of Lot 3 building foundation Removal of existing vegetation	6. Excavation within the driplines of these 3 trees shall be done using pneumatic excavation or hydro-excavation under supervision by the Project Arborist. 7. The Project Arborist shall document and instruct construction crews to cleanly cut all encountered roots. 8. Roots that are exposed shall be covered in wet burlap until the foundation is poured and the trench is backfilled.
Tree #s 40, 41, 43, 49, 50, 69 Construction of Lot 2 building foundation Removal of existing vegetation	9. Soil protection shall be installed along the south side of the building footprint to protect from heavy machinery (see Tree Protection Plan). Soil protection shall consist of three-quarter inch plywood on top of 5-inches of woodchip mulch. 10. Excavation for the building foundation within the dripline of trees shall be done using a flat-fronted bucket to avoid unnecessary ripping/tearing of roots. 11. Roots encountered that are greater than 2-inches diameter shall be documented and cleanly cut. 12. The stumps of tree #s 47, 51, 52, 54 shall be left in place and not ripped from the ground with heavy machinery.

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info@pacificlandwa.com

August 20th, 2023

Responses to City Review Comments Dated June 5th, 2023
Cui Preliminary Short Plat
SUB22 – 009

General:

1. When resubmitting, provide a response letter to address each review comment. Please also state where the proposed changes can be found (i.e. sheet number, document name, etc.). When the City receives your resubmittal, we will review it to determine if the materials provided represent a complete resubmission. Failure to address any item listed in this letter shall constitute an incomplete resubmission.

   Response,

   This list of responses, the attached Arborist responses, and attached Attorney responses are provided herein as official applicant responses to city review comments as requested.

2. The applicant bears the burden of proof that the proposed project is consistent with all laws, standards, and requirements provided in the MICC. The City does not defend the legitimacy of an application. It is up to the applicant to provide the City with enough information to determine if the proposal is consistent with the provisions of the MICC or not.

   Response,

   Noted

3. Emails or letters containing application documents, plans, and studies directed to staff are not resubmittals. All resubmittal documents, plans, and studies shall be uploaded electronically to the SFTP website. There are no exceptions to this requirement.

   Response,

   Noted

4. When resubmitting electronically to the SFTP website, please make it clear in the file name that the resubmittal is for all associated land use applications and notify the Permitting Staff at epermittech@mercerisland.gov.

   Response,

   Noted

5. The City received several comment letters from neighbors about this proposal. Please review the attached comment letters and provide a response to the neighbors' concerns. All public comments received during the public comment period shall be addressed by the applicant. The applicant shall respond to all comments in writing and provide a copy of the communication to the city to include in the case record.

   Response,

   See attached responses prepared by Attorney Jacque St. Romain on behalf of the applicant.

6. Please remove Sheet C-1.1 from the plan set.

   Response,

   This Sheet has been removed form the plan set as requested.

Planning:

1. Provide a revised project narrative that describes how the proposal meets all relevant code sections in the city's subdivision code. In particular, provide an itemized list that addresses the following sections:

   - MICC 19.08.020(D)(1), Findings of fact.

     Response,

     See attached Revised Project Narrative

   - MICC 19.08.030, Design standards, subsections (B) through (E).

     Response,

     See attached Revised Project Narrative

2. Provide more information about the provisions this short subdivision is proposing for public health, safety, and general welfare. Such information includes provisions for:

   - Open space.

     Response,

     The proposed 4 Lot Short Plat is not required to provide designated Open Space and therefore none is provided. However, the developed site conditions will include planting new trees around the perimeters of the subject Short Plat creating healthy natural vegetation spaces, see attached Planting Plan prepared by the Project Arborist.

   - Drainage ways, potable water supplies, and sanitary waste.

Response,

The proposed 4 Lot short plat will provide an on-site underground concrete stormwater vault to control and mitigate stormwater impacts which will protect downstream storm waters and drainage ways consistent with the Washington State DOE Manual.

The proposed 4 Lot Short Plat will be served by the existing potable water and sanitary systems in 90th Ave SE and therefore additional potable water and sanitary systems are not warranted, and none will be provided.

- Streets, roads, alleys, other public ways, and transit stops.

Response,

Other than providing one on-site private 20' wide X 102' long paved road to serve the proposed 4 lots and piping existing roadside ditch across the subject parcel frontage in 90th Ave SE as requested by the City of Mercer Island, the proposed 4 Lot Short Plat is not required to provide any additional facilities and therefore none is provided.

- Parks and recreation, including playgrounds.

Response,

The proposed 4 Lot Short Plat is not required to provide any such improvements, the city of Mercer Island did not mandate such improvement and therefore none is provided.

- Schools and schoolgrounds.

Response,

The proposed 4 Lot Short Plat is not required to provide any such improvements, the city of Mercer Island did not mandate such improvement and therefore none is provided.

3. Describe whether the public use and interest will be served by this proposal. Also describe how the proposed short subdivision conforms to applicable zoning and land use regulations.

Response,

Please refer to attached Revised Project Narratives for detailed responses to this review comment.

4. Show how building pads for Parcels 1 through 4 that are consistent with the requirements of MICC 19.09.090:

- The building pad shall be located to minimize or prevent impacts as indicated in the following:
  - Removal of trees and vegetation required for retention pursuant to Chapter 19.10 MICC shall be prevented.

Response,

Every effort has been made to comply with MICC 19.10 provisions, proposed building pads will be located in a manner that retains the maximum numbers of existing healthy trees and new trees will be planted around the perimeters of the subject parcel. Please refer to the attached Arborist Report, attached Trees Retention Plan, and Trees Planting Plan for more information regarding this issue.

- Disturbance of the existing, natural topography as a result of anticipated development within the building pad shall be minimized.

Response,

As shown on the attached revised Civil Plans, Sheet C – 7.0 the proposed building pads are located in a manner that minimizes site grading work and impact to existing topography while maintaining on-site positive gravity drainage systems. The anticipated grading work within building pads is very minimal and is not expected to exceed 24" of grade cut / fill as necessary to construct the new building pads.

- Impacts to critical areas and critical area buffers shall be minimized, consistent with the provisions of Chapter 19.07 MICC.

Response,

As shown on the attached revised Civil Plans Sheets C – 6.0 and C – 7.0 the proposed building pads are not located within controlled slopes or landslide hazards limits. Note the previously submitted Geotechnical Report dated February 18th, 2022 includes sufficient information to address the city concerns regarding these issues.

- Access to the building pad shall be consistent with the standards contained in MICC 19.09.040.

Response,

As shown on the attached revised Civil Plans Sheets C – 6.0 and C – 7.0 the proposed access to building pads is consistent with MICC 19.09.040. The proposed access road is 20' wide, and 102' long paved surface and will have a 28' turning radius at its intersection with 90th Ave SE, the proposed access road is less than 150' long and therefore Cul-De-Sac (CDS) improvement is not warranted for the fire access. The proposed individual driveways are more than 8' in width and are at the right angle to the proposed access road.

- Building pads shall not be located within:
  - Required front, rear, or side yard setbacks.
  - Streets or rights-of-way.
  - Critical areas, buffers, or critical area setbacks. Building pads may be located within geologically hazardous areas and associated buffers when all of the criteria listed in MICC 19.09.090(A)(2)(c)(i) through (iii) are met.

Response,

The attached revised Civil Plans Sheet Sheets C – 6.0 and C – 7.0 will show the proposed building pads are not located within required front, rear, or side yard setbacks, not located within street right-of-way, and not located within critical areas limits, buffer, or setback areas.

The building pads must be designed to exclude the driplines of trees required to be retained under the provisions of Chapter 19.10 MICC.

Response,

The building pads will not be constructed within driplines of trees required to be retained. However, in unavoidable circumstances, some of the tree branches may be trimmed back to make room for the building construction and the attached Arborist Report proposes special construction provisions / methods to maintain the tress viable roots conditions.

5. The applicant shall provide an analysis of school bus stops or sate walking routes to schools. The applicant shall coordinate with the school district on bus stop locations that will serve the proposed development. The applicant shall provide the analysis and approval from the school district at the next submittal.

Response,

The property owner contacted the City of Mercer Island School District; and based on the district emails; existing walks / paths to and from school facilities do provide safe student walking measures, the district did not ask for any additional student walks improvement and therefore none will be provided.

6. MICC 19.08.030(E)(4) and MICC 19.09.100(A) require development proposals to use common utility corridors where feasible. The site plan shows that each of the lots of the proposed short subdivision will have its own utility corridor. Revise the location of the utilities so they use a common utility corridor. Alternatively, provide documentation showing how using a common utility corridor is infeasible for this proposal.

Response,

The attached revised Civil Plans Sheet C – 7.0 will show one utilities corridor under the proposed on-site access road within proposed utilities easements along the frontage of each proposed lot.

Civil Engineering:

1. Provide a plat map that shows only bearings/distances, easements, and legal descriptions. The plat map must be tied to at least two known city monuments.

Response,

This information is now shown on the attached revised Civil Plans Sheet C – 4.0

2. The private drainage pipe on Island Crest Way (Item 13 on Sheet C-6.0) should not be located in the public right-of-way. The drainage connection from the new development shall be perpendicularly connected to the existing City catch basin #27a-234 to minimize impacts to the public right-of-way.

Response,

It is not possible to connect the storm water outfall to existing catch basin # 27a – 234 as requested by the city. The reason is that to make such connection will require additional stormwater easement on the west side of proposed lot 2, providing additional stormwater easement will compromise available land areas which we want to utilize to plant new trees consistent with MICC 19.10. Instead, we are proposing to connect the proposed stormwater outfall to the existing public stormwater system in Island Crest Way at a location upstream of existing CB # 27a-234 but we removed the previously proposed 12" stormwater pipe as requested by the City of Mercer Island, please see attached revised Civil Plans Sheet C – 7.0 for additional information.

3. The existing drainage ditch along the frontage of 90th Ave SE shall be piped as a part of the plat improvements.

Response,

The attached revised Civil Plans Sheet C – 7.0 will show stormwater pipes in said ditch as requested by the city.

4. Add the following note to Sheet C-6.0:

"The utility design (water, sewer, and storm) shown on Sheet C-6.0 is conceptual only. The basic layout and conceptual design of the utility design will be reviewed under this short plat application. The detailed design has not been reviewed for construction. All design related to water, sewer, storm and roadway are not approved and will be reviewed under a separate permit."

Response,

Please note the plan sheet number has been changed, and therefore this note is now shown on Plan Sheet C – 7.0

For questions about civil engineering requirements, contact Ruji Ding, Senior Development Engineer, at ruji.ding@mercerisland.gov or at 206-275-7703.

Fire:

1. Add the following note to the face of the plat:

"All building permits are subject to meeting current fire code requirements at the time of a complete

submittal, including fire apparatus access as outlined in adopted code sections of the International Fire Code Appendix D. Fire plan reviews will be conducted at time of building permit submittal and may require additional fire protection systems and/or additional fire prevention measures for building permit approval."

Response,

Please note the plan sheet number has been changed, and therefore this note is now shown on Plan Sheet C – 4.0

For questions about fire requirements, contact Jeromy Hicks, Fire Marshal, at jeromy.hicks@mercerisland.gov or at 206-794-2512.

Arborist

Response,

Please refer to the attached responses from the project Arborist.

We trust the above responses fully address the city review comments as we look forward to the city approval for this 4 Lot Preliminary Short.

Sincerely,

Mazen Haidar, PE

Pacific Land Engineering

Attachments

CASCARA TREE CONSULTING
ARBORIST RESPONSE TO CITY REVIEW COMMENTS

TO:	Mr. Jintao (Addison) Cui
REFERENCE:	Arborist Response to City Review Comments RE: SUB22-009 (Cui Preliminary Short Subdivision)
SITE ADDRESS:	4833 90th Ave SE, Mercer Island, WA
DATE:	12/6/2023
PREPARED BY:	Katie Hogan, ISA Certified Arborist PN-8078A ISA Tree Risk Assessment Qualified

This report addresses the City of Mercer Island's comments dated October 25, 2023.

1.Please provide an updated Tree Inventory Worksheet that matches the arborist report and plan set. All regulated trees over 10 inches in diameter, including non-viable trees, need to be counted in the total number of trees. 30% of the total number of trees greater than 10 inches in diameter must be retained.

Arborist Response: See provided revised worksheet. The project now proposes retention of 16 of the 54 large trees on the site for a total retention of 30% (rounded from 29.6).

2. Please show an X through all trees proposed to be removed on the site plan. It is hard to see which trees are proposed to be removed on the current plan set. Marking each removed tree with an X will avoid mistakes during the site clearing phase.

Arborist Response: Completed. See the revised Tree Retention Plan dated 12/4/2023, Sheet TR-01.

3. Please provide the following information for the exceptional trees numbered 26, 27, 33, and 55. Justification for the removal of these exceptional trees under MICC 19.10.060(A)(3) will be required. It is not sufficient to simply state an exceptional tree would prevent the creation of a lot.

- ***a. You will be required to save 30% of all large regulated trees, and any exceptional trees over 24 inches in diameter. Please provide a plan with these trees indicated along with their driplines as determined by the project arborist.***

  Arborist response: There are 54 large, regulated trees on the project site. This project proposes the retention of 16 large, regulated trees for a total retention of 30-percent. There are 9 Exceptional trees with diameters of 24" or greater; 3 of which are in advanced stages of decline and considered non-viable (Tree #s 27, 35, 56). See original Arborist Report dated 8/9/2023 for detailed information on non-viable trees. Of the 6 viable Exceptional trees with diameters 24" or greater, two are proposed for retention

(#s 4 and 63). The four additional trees proposed for removal, #s 26, 28, 33 and 55, are addressed below.

b. ***Please show different options for lot line placements that retain the most exceptional trees or the exceptional trees most suitable for retention.***

Arborist Response: See revised site plans showing smaller proposed homes to maximize tree retention.

c. ***Determine the allowed setbacks and maximum gross floor area for each lot and configure the building pad to best avoid any exceptional trees and retain 30% of large trees. You may need to modify the rectangular building pads to accommodate exceptional tree driplines.***

Arborist Response: See revised site plans showing smaller proposed homes and non-rectangular homes to maximize tree retention.

d. ***Please include an updated narrative and plan showing that you have followed the above steps. You may only remove an exceptional tree after this exercise takes place and you find that retaining the tree would limit the constructible gross floor area of a lot to less than 85% of the maximum gross floor area allowed in the zone.***

Arborist Response: The project requests the removal of 4 healthy Exceptional trees 24" DBH or greater. Narrative is provided below detailing the site plan alterations that were considered to support retention.

Tree #26 - Alternative layouts for the required access, utility connections, and stormwater detention were explored to see if retention of this tree was possible. This included moving these site improvements along the north and south property lines. However, because the city is requiring that the project connect to the existing storm drain along Island Crest Way, there was no feasible alternative that resulted in fewer tree removals.

Tree #28 - See comments for Tree #26 above. This tree conflicts with the proposed access and stormwater utility connections.

Tree #33 - Options were explored for adjusting the building pad size and location to support the retention of tree #33; however, there was no feasible alternative that would allow for adequate protection of this tree. Due to the required access road, on-site drainage retention/detention vault, stormwater system and utilities, retention of this tree is not possible.

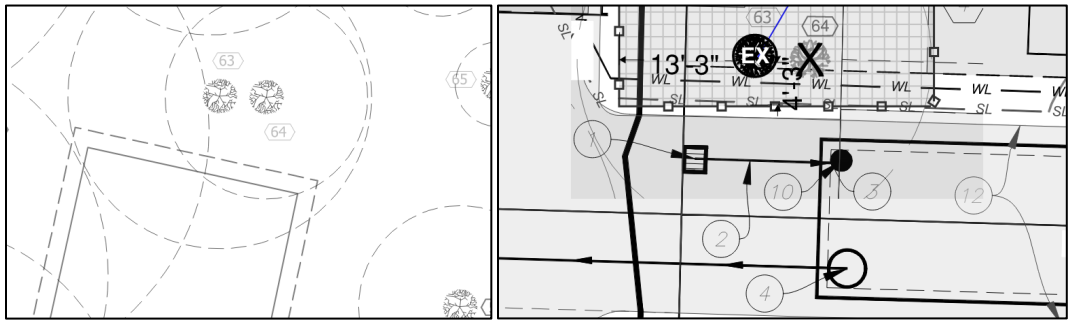
Tree #55 - The building pad has been modified on Lot 4 by flipping the proposed house; however, even with this adjustment the excavation needed to construct the foundation will be approximately 3-feet from the tree trunk. Due to the large diameter and required area to adequately preserve this tree, there were no feasible alternatives to support retention while still maintaining the required maximum gross floor area requirement.

4. The following trees are shown as retained, but not protected at their driplines: 3, 4, 5, 36, and 69. All retained trees must be protected in such a way that they will not be damaged and will remain viable long term. The trees may be considered removed if too many roots are damaged. Air excavation root analysis or other noninvasive techniques approved by the project shall be performed before any building pad location is approved. After the limits of allowable disturbance are determined by the project arborist, these limits must be included in the tree protection plan. Any excavation within the driplines of exceptional trees or other trees required for retention can only be performed if they will not be damaged as per MICC 19.10.080. The project arborist must discuss this code and the long-term viability/stability of the trees after the proposed excavation within the dripline area.

Arborist Response: Tree #s 3, 4, 5, 36, 54 and 69 are now protected at their driplines. See the revised Tree Retention Plan dated 12/4/2023, Sheet TR-01.

Alterations to proposed site plans to support retention include:

Lot 1 – House footprint was shifted west to edge of buildable area and house footprint was reduced to retain Exceptional tree #s 63 and 68. Tree #63 is a 25.2-inch DBH Pacific Madrone tree located in the southeast corner of proposed Lot 1. The tree is proposed to be protected at its dripline to the north and east; however, encroachment is proposed to the south to construct the access road, detention tank, and associated catch basin. This work will occur 6 to 10 feet from the tree trunk. The existing single-family home is located about 8-feet south from the trunk of this tree; therefore, it is not anticipated that impacts from this work will substantially impact tree #63.



Figures 1 and 2. Tree #63 proximity to existing house and foundation (left). Location of proposed utilities and driveway (right).

Lot 2 – House footprint was reduced to retain Exceptional tree #54 and large tree #s 51 and 52.

Lot 3 – House footprint was reduced and shifted further to the south outside of the driplines of Exceptional tree #s 4 and 5 and large tree #3.

Lot 4 – Grading was adjusted to preserve the dripline area west of large tree #36. The city is requiring a 12" storm pipe be constructed to the east of tree #36 to pipe the existing ditch. Tree protection fencing is shown to extend 7-feet to the east at the limits of disturbance for this utility work. This species of tree has a high tolerance to construction impacts and, due to its young age, should be able to tolerate this level of impact. To ensure adequate protection, any utility work within the dripline shall be monitored by the project arborist.

Photo 2. Tree #36 and approximate location of proposed storm water pipe.

PACIFIC LAND ENGINEERING
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Bellevue, WA 98005 • (425) 615 – 6160
info@pacificlandwa.com

December 8th, 2023

Responses to City Review Comments Dated October 25th, 2023
Cui Preliminary Short Plat
SUB22 – 009

Please refer to the attached Arborist list of detailed responses to the City's Arborist review comments dated October 25th, 2023.

This letter will provide responses to the city review bullets 2 through 4 under review comments number 3 as shown below. As requested by the city we re-configured and moved proposed building pads on the proposed lots as follows:

1. We moved the proposed building pad within proposed lot -1 westerly while maintaining compliance with required maximum gross floor area requirement. This action resulted in saving two exceptional trees, number 68 and 63 as shown on the attached revised Civil Plans and attached Trees Retention Plan.

2. We trimmed proposed building pad within proposed lot – 2 while maintaining compliance with required maximum gross floor area requirement. This action resulted in saving one exceptional tree number 54 as shown on the attached revised Civil Plans and Trees Retention Plan.

3. We trimmed proposed building pad within proposed lot – 3 while maintaining compliance with required maximum gross floor area requirement. This action resulted in saving two exceptional trees, number 4 and 5 as shown on the attached revised Civil Plans and Trees Retention Plan.

4. We modified the layout of proposed building pad within Lot – 4 by flipping the proposed house while maintaining compliance with required maximum gross floor area requirement. This action resulted in less impact to surrounding exceptional trees as shown on the attached revised Civil Plans and Trees Retention Plan.

The above reconfiguration to proposed building pads will result in saving 8 exceptional trees out of existing 12 exceptional trees. It is not possible to save the remaining 4 exception trees due to the need of proposed on-site access road, proposed on-site drainage retention/detention vault, proposed on-site storm water conveyance system, and proposed on-site utilities.

The general shape of the current parcel is square, adjusting the proposed lot lines to produce 4 lots with odd shapes will result in new lots that are not consistent with the City land use code and development regulations, including but not limited to required minimum lot area, required lot dimensions (depth, width, and length), required building setback, required common access road, and required access driveway to each lot, and will further increase the total of new impervious surfaces as well as will further create the need to remove more trees than is currently proposed. Therefore, it does not make any sense to provide new Short Plat map showing lot configuration that we already know it will not comply with the above referenced city code requirement, this must be understood by the city staff in general by the City Arborist in particular.

We trust the above responses fully address the city review comments and we look forward to the city's approval for this 4 Lot Preliminary Short.

Sincerely,

Mazen Haidar, PE

Pacific Land Engineering
Attachments

CASCARA TREE CONSULTING
ARBORIST RESPONSE TO CITY REVIEW COMMENTS

TO:	Mr. Jintao (Addison) Cui
REFERENCE:	Arborist Response to City Review Comments RE: SUB22-009 (Cui Preliminary Short Subdivision)
SITE ADDRESS:	4833 90th Ave SE, Mercer Island, WA
DATE:	1/7/2024
PREPARED BY:	Katie Hogan, ISA Certified Arborist PN-8078A ISA Tree Risk Assessment Qualified

This report addresses the City of Mercer Island's comments dated December 29, 2023.

1.The tree protection fencing needs to match on all plan sheets. Sheet TR-01 and sheet C-5.0 need to match with the arborist recommendations.

Arborist Response: See the comment response provided by the Civil Engineer dated January 10th, 2024.

2. Tree 55 is a viable exceptional tree over 24 inches in diameter proposed for removal. Please speak to the code for justification of the removal of viable trees according to MICC 19.10.060(A)(3). Discuss and show in a diagram how if you protect the tree, you would not be able to obtain at least 85% of your maximum gross floor area. If this is the section of code you think best describes the reason for removing this tree.

Arborist Response: The below diagram illustrates a reduced building footprint for Lot 4 to adequately retain Tree #55. The reduced footprint results in a gross floor area of less than 85-percent of the allowable GFA per MICC 19.02.020(D) and, as such, the criteria of MICC 19.10.060(A)(3) are met supporting tree removal.

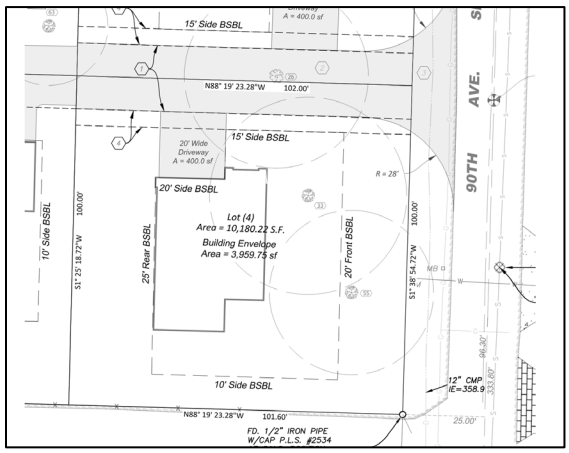

Figure 1. Diagram showing reduced house footprint necessary to preserve Tree #55.

3. Trees 7, 57, 61, 62, 65 are listed on the tree inventory worksheet as large regulated trees but are non-regulated since they are below 10 inches in diameter and do not become exceptional at that size. This will impact your percentage of trees to be retained. These trees are not required to be replaced since they are non-regulated.

Arborist response: These five trees have been removed from the tree table and sheet TR-01. With these 5 trees removed, overall tree retention for this project is now at 32.7-percent. See the provided updated Tree Calculation Worksheet.

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Bellevue, WA 98005 ◆ (425) 615 – 6160
info@pacificlandwa.com

January 8th, 2024

Responses to City Review Comments Dated December 29th, 2023
Cui Preliminary Short Plat
SUB22 – 009

Please refer to attached Arborist list of detailed responses to the City's Arborist review comments dated December 29th, 2023.

This letter will provide responses to the city planning review comments and to the city first two Arborist review comments listed in the City's letter of review comments dated December 29th, 2023.

Planning;

1. The building envelopes shown on the plans set is not the building pads as proposed. The building envelopes are shown in dashed line type, whereas the building pads are shown in solid linetype inside the building envelopes consistent with building setback requirements.

2. There is no city code that requires 5' set back between trees dripline and building pads, this matter was discussed with and waived by the City Planning Manager Ryan Harriman on January 2nd, 2024.

Arborist;

1. The intent of Civil Plan Sheet C-5.0 is to show the overall site temporary erosion and sedimentation control (TESC) devices as required by State laws, and it is not intended to show individual clearing limits / tree protection fencing around existing trees to remain. To prevent clutter of information shown and for plans clarity individual clearing limits / tree protection fencing around existing trees to be retained is shown on the Arborist Plan TR-01, please refer to that sheet for additional information.

2. To retain Exceptional Tree # 55, the building foot print on proposed lot 4 must be reduced significantly, see attached sketch of reduced foot print. This reduced footprint will result in less than 85% of allowable GFA for proposed house on proposed lot 4, and therefore, Tree # 55 cannot be retained.

We trust the above responses fully address the city review comments and we look forward to the city's approval of this 4 Lot Preliminary Short.

Sincerely,

Mazen Haidar, PE
Haidar
Pacific Land Engineering
Attachments

From: Ryan Harriman
To: Molly McGuire
Subject: FW: SUB22-009
Date: Thursday, January 11, 2024 11:06:22 AM
Attachments: 20240111 Elementary Stops near Plat at 4833 90th Ave SE.JPG
20240111 IMS Stops near Plat at 4833 90th Ave SE.JPG
20240111 MIHS Stops near Plat at 4833 90th Ave SE.JPG

Ryan Harriman, EMPA, AICP
Planning Manager
City of Mercer Island – Community Planning & Development
206-275-7717 | www.mercerisland.gov
Notice: Emails and attachments may be subject to disclosure pursuant to the Public Records Act (chapter 42.56 RCW).
The City of Mercer Island utilizes a hybrid working environment. Please see the City's Facility and Program Information page for City service hours of operation.

From: William Gerdes <william.gerdes@mercerislandschools.org>
Sent: Thursday, January 11, 2024 9:51 AM
To: Ryan Harriman <ryan.harriman@mercerisland.gov>
Subject: Re: SUB22-009

Hi Ryan,

Always feel free to reach out for info like this. The following tool is very accurate, but occasionally gets some edge cases wrong (where a house is right on the borderline between school boundaries):

https://www.findmyschool.us/

Here's a map of our current elementary boundaries:

https://www.google.com/maps/d/u/0/viewer?mid=1_R0m37n1Qfg2ch-7eUuUEjoZn7QcR4Sv&ll=47.56023107411552%2C-122.22790580000002&z=13

The current school assignments for this plat would be:
Elementary: Island Park Elementary
Middle School: Island Middle School
High School: Mercer Island High School

Technically the plat is inside the half mile walk zone for Island Park, but because students would have to cross Island Crest Way, we typically provide bus service. Exact

service and locations vary from year to year dependent on population and other factors. Attached are maps of current elementary, middle, and high school service, respectively. Which is representative. Generally speaking stops for older students will be farther apart and they will be expected to walk further.

Yours,
William

On Thu, Jan 11, 2024 at 8:54 AM Ryan Harriman <ryan.harriman@mercerisland.gov> wrote:

> Hi William,
>
> I'm looking for some information for a short subdivision and thought I'd reach out to you.
>
> We have a 4-lot short plat, SUB22-009, potentially going in at 4833 90th Ave SE (parcel 4351300487). The private access is off 90th Ave SE.
>
> Where would I be able to get some information on what schools' children living at this location will be attending? Are there maps that show the distance from the schools and the location of the bus stops?
>
> Please let me know if you have any questions.
>
> Thanks, William.
>
> Best regards,
>
> Ryan Harriman, EMPA, AICP
> Planning Manager
> City of Mercer Island – Community Planning & Development
> 206-275-7717 | www.mercerisland.gov
> Notice: Emails and attachments may be subject to disclosure pursuant to the Public Records Act (chapter 42.56 RCW).
> The City of Mercer Island utilizes a hybrid working environment. Please see the City's Facility and Program Information page for City service hours of operation.

--

BECOME A BUS DRIVER

--

William Gerdes *(he/him)*
AM Dispatch/Trip Desk/Driver Trainer
Mercer Island School District
206.230.6335

--

Office Hours: Monday, Tuesday, Thursday, Friday, 6:30am to 10:30am, 12:30pm to 4:30pm. Wednesday, 6:30am to 10:30am, 11:30am to 3:30pm. If you need urgent changes/cancellations outside of those hours, please contact Dispatch at 206.236.3338

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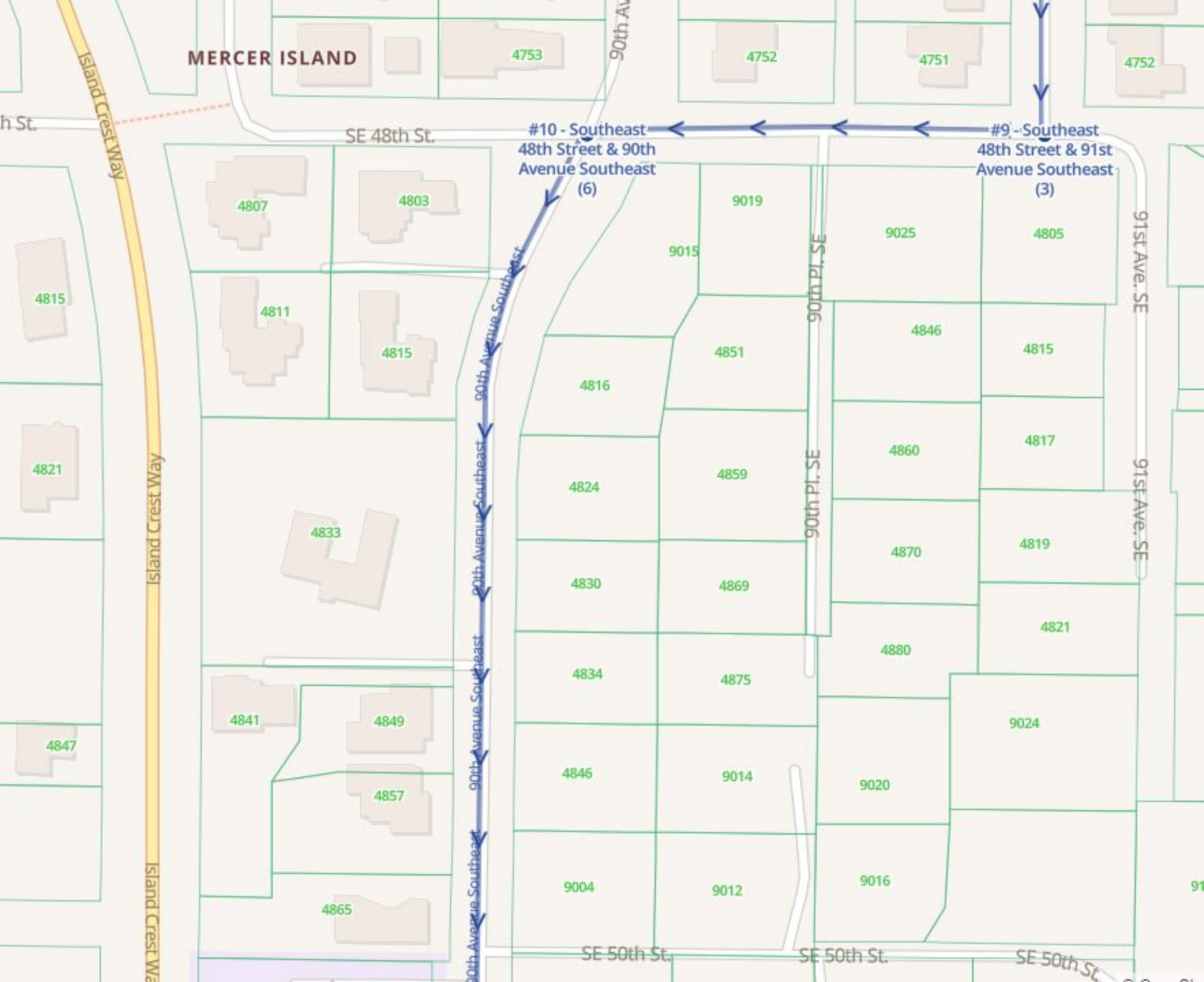
All electronic mail messages in connection with Mercer Island School District business which are sent or received by this account are subject to the Washington State Public Records Act and may be disclosed to third parties.


MERCER ISLAND
Island Crest Way
SE 48th St.
#10 - Southeast 48th Street & 90th Avenue Southeast (6)
#9 - Southeast 48th Street & 91st Avenue Southeast (3)
90th Avenue Southeast
90th Pl. SE
91st Ave. SE
SE 50th St.
4753
4752
4751
4807
4803
4811
4815
4821
4833
4841
4849
4847
4857
4865
9019
9015
9025
4805
4851
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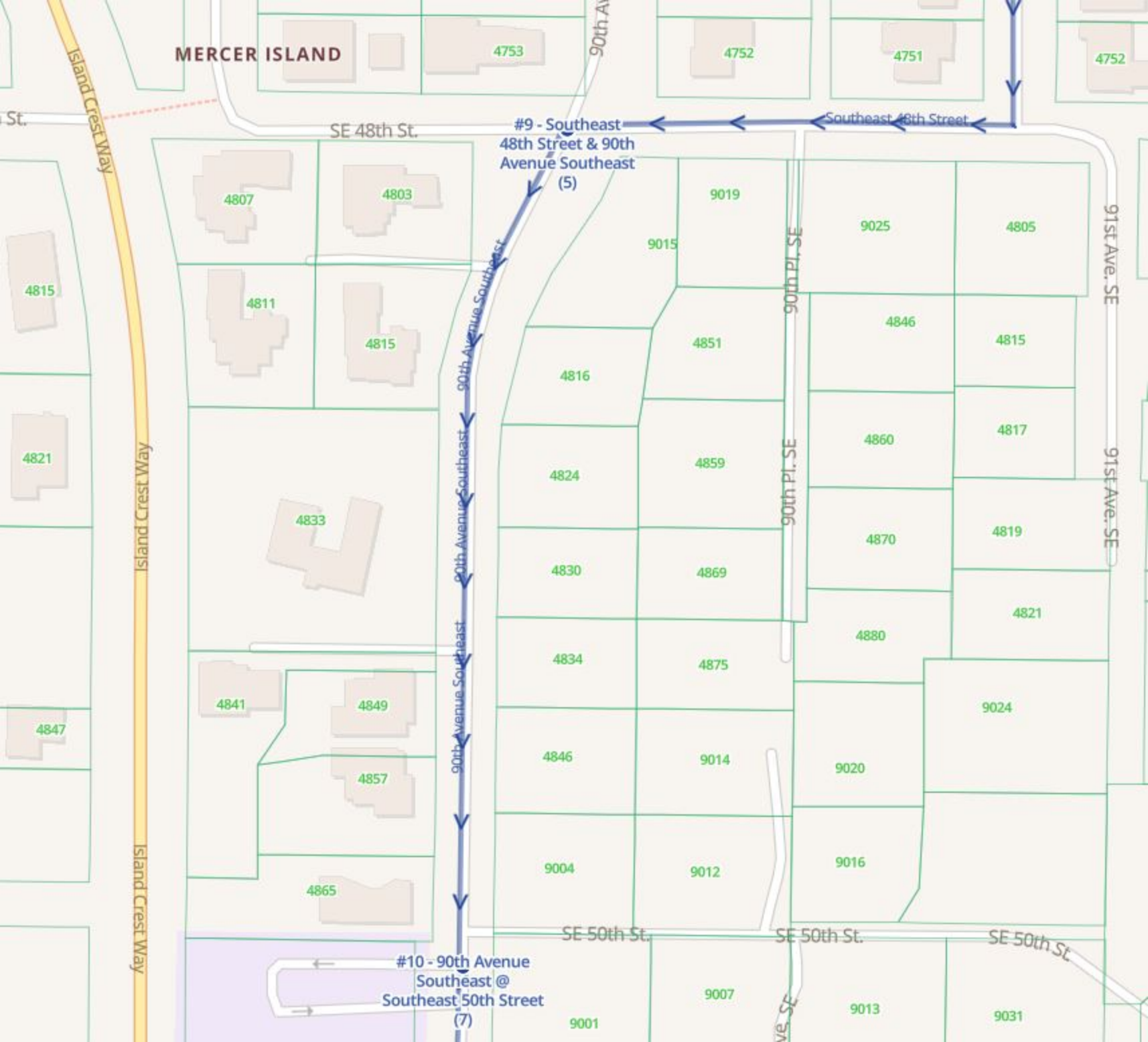
MERCER ISLAND
Island Crest Way
SE 48th St.
Southeast 48th Street
#9 - Southeast 48th Street & 90th Avenue Southeast (5)
90th Avenue Southeast
90th Pl. SE
91st Ave. SE
#10 - 90th Avenue Southeast @ Southeast 50th Street (7)
SE 50th St.
4753
4752
4751
4807
4803
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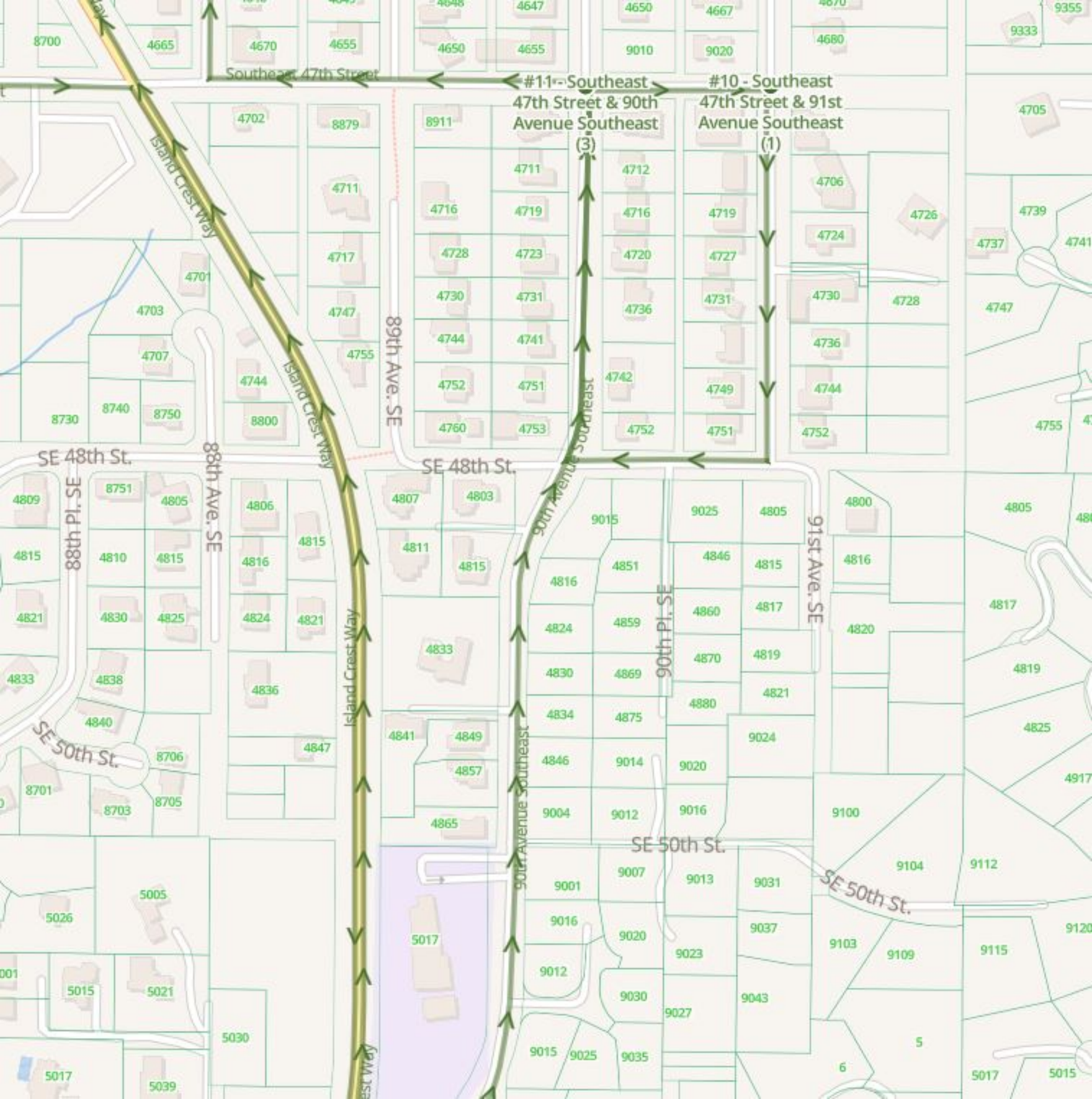
Southeast 47th Street
#11 - Southeast 47th Street & 90th Avenue Southeast (3)
#10 - Southeast 47th Street & 91st Avenue Southeast (1)
Island Crest Way
89th Ave. SE
88th Ave. SE
88th Pl. SE
90th Avenue Southeast
90th Pl. SE
91st Ave. SE
SE 48th St.
SE 50th St.

Memorandum

To: Andrew Leon

From: Ruji Ding

Re: Home Link Capital Short Plat SUB22-009

Date: February 7, 2024

I've reviewed the submittal package and have the following conditions of preliminary short plat approval:

1. Easements for shared access, utilities, and storm drainage facilities shall be depicted on the face of the final plat. Language which indicates joint rights and responsibilities of each lot with respect to all utilities and roadways shall be shown along with individual lot Joint Maintenance Easement Agreements (where applicable) for all shared usage and filed with the King County Recorder and noted on the final plat. The easement shall indicate whether it is public or private, existing, or proposed.
2. Damage to adjacent properties or public rights-of-way resulting from construction (e.g. siltation, mud, runoff, roadway damage caused by construction equipment or hauling) shall be expeditiously mitigated and repaired by the contractor, at no expense to the City. Failure to mitigate and repair said damage, or to comply with the approved construction plans, the permits issued by the City, or the City requirement for corrective action may be cause for the issuance of a "Stop Work" order, foreclosure on the plat bond/security, and/or other measures deemed appropriate by the City Engineer or Code Official to ensure construction consistent with the approved plans and protection of public safety.
3. The final plat shall be prepared in conformance with Title 58 RCW and Surveys shall comply with Chapter 332-130 WAC. Submit using Mercer Island's datum and tie the plat to at least two City monuments.
4. A City of Mercer Island title block for approval signatures shall be provided on the final plat along with the designated Long Plat number.
5. Construction of all improvements for access, utilities, storm drainage, and site work shall comply with current City ordinances and standards.
6. All utilities serving the plat shall be under grounded (MICC 19.08.040) and shall be designed and constructed in accordance with City of Mercer Island Ordinances.

7. Plat improvement plans prepared by a Washington State licensed engineer shall be submitted for review and approval by the City Engineer. The improvement plans shall include the following:
    a. Plat access road - Comply with the Fire Code requirements and standards contained in MICC 19.09.040.
    b. Temporary Erosion Control measurements.
    c. Grading Plan.
    d. Water main, water meters, and appurtenances
        i. Provide water services for each lot. Locate water meters outside of the future driveway areas and any paved areas.
        ii. Abandon all existing water services currently serving the existing lot at the City water main.
    e. Sanitary sewer and appurtenances
        i. Provide sewer connections for each lot. Show the sanitary sewer stub outs for each lot.
        ii. The side sewer for all lots shall be a shared side sewer with one single connection to the city Sewer Main.
        iii. The sanitary sewer system serving all lots will be a private sewer system.
    f. Stormwater.
        i. Provide drainage improvements in compliance with MICC 15.09.
        ii. Show the storm drainage stub outs for all lots.
        iii. The existing drainage ditch along 90th Ave. SE shall be piped.
    g. Dry utilities
        i. Show the proposed dry (power, gas, etc.) utility corridor on the plan.
8. Right of Way Restoration and roadway replacement limits shall be determined by the City Engineer prior to final inspection of the Site Development Permit.
9. All plat improvements shall be completed prior to final plat approval prior to issuance of building permits. A survey grade as-built drawing in PDF format that shows all utilities and plat improvements shall be submitted to the City Engineer upon completion of the work.
10. The following notes shall be placed on the final plat:
    a. Maintenance and repair of the private sanitary sewer system and joint use side sewers (sewer lines from the building to the private sewer main), shared roads, access easements, public trail, private storm drainage facilities shall be the responsibility of the owners of each lot served (with the exception that owners of any lot which is lower in elevation shall not be responsible for that portion of a private side sewer above their connection). If maintenance and repair of any facilities enumerated above are not performed to the satisfaction of the City Engineer, after a timely demand has been made for such action, the City or its agent shall have the right to enter upon the premises and perform the necessary maintenance and repair to protect the safety and general welfare of the public and shall have the right to charge the owner of each lot an equal share of the total maintenance and repair costs. The City or the owner of any lot within this plat shall have the right to bring action in Superior Court to

require any maintenance or repair and to recover the costs incurred in making or effecting repairs to improvements.

b. Private stormwater facilities shall be inspected and maintained in conformance with MICC 15.09.070.
c. All staging for construction shall occur on site and shall not be located in the public right-of-way.
d. No permanent landscaping, structures, or fences shall be placed on or within public utility, storm drainage, or pedestrian path easements without the written approval of the City Engineer.
e. If in the opinion of the City Engineer, utilities or storm drainage facilities require maintenance, repair or replacement, the City or its agent shall have the right to enter those lots adjoining the facility for the purpose of maintaining, repairing, relocating or replacing said facilities.
f. Installation of landscaping and/or structures including trees, shrubs, rocks, berms, walls, gates, and other improvements are not allowed within the public right-of-way without an approved encroachment license agreement from the City prior to the work occurring (MICC 19.06.060).

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
206.275.7605 | www.mercerisland.gov/cpd

PUBLIC NOTICE OF DECISION

NOTICE IS HEREBY GIVEN that approval has been granted for the application described below:

File No.:	SUB22-009
Permit Type:	Type III
Description of Request:	A request for to divide the subject property into four lots. The subject property has an area of 41,165 square feet (0.945 acres) and the resulting lots will have areas of 10,389 square feet (Lot 1), 10,357 square feet (Lot 2), 10,219 square feet (Lot 3), and 10,180 square feet (Lot 4). All lots will be accessed from 90th Avenue SE via a new shared access tract along the north side of the parent lot.
Applicant/ Owner:	Jintao (Adison) Cui / Home-Link Capital, LLC
Location of Property:	4833 90th Avenue SE, Mercer Island, WA 98040 King County Assessor tax parcel number: 4351300487

SEPA Compliance:
The project is exempt from SEPA Review pursuant to WAC 197-11-800(6)(d).

Applicable Development Regulations:	Pursuant to Mercer Island City Code (MICC) 19.15.030 Table A, applications for Short Subdivisions are required to be processed as Type III land use reviews. Processing requirements for Type III land use reviews are further detailed in MICC 19.15.030 Table B.
Other Associated Permits:	NA
Project Documents:	https://mieplan.mercergov.org/public/SUB22-009
Decision:	Approved subject to conditions.

Appeal Rights: *DISCLAIMER: This information is provided as a courtesy. It is the ultimate responsibility of the appellant to comply with all legal requirements for the filing of an appeal.*

Parties of record have the right to appeal certain permit and land use decisions. In some cases, other affected parties also have appeal rights. Depending on the type of decision, the appeal may be heard by a City Hearing Examiner, Commission, Board, or City Council, or outside the City to the State Shoreline Hearings Board, the State Growth Management Hearings Board, or King County Superior Court. For a comprehensive list of actions and the applicable entity who will hear the appeal, see MICC 19.15.030 Table B.

If you desire to file an appeal of a decision that is appealable to the City, you must submit the appropriate form and file it with the City Clerk **within the time stated in the Notice of Decision.** Forms are available from Community Development and Planning. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand a decision, the appeal hearing body must find that there has been substantial error; the proceedings were materially affected by irregularities in procedure; the decision was unsupported by material and substantial evidence in view of the entire record; or the decision is in conflict with the City's applicable decision criteria.

Application Process Information:	Date of Application:	November 16, 2022
	Determined to Be Complete:	December 23, 2022
	Public Comment Period:	January 9, 2023 through 5:00 PM on February 8, 2023
	Date Notice of Decision Issued:	February 12, 2024
	Appeal Filing Deadline:	5:00 PM on February 26, 2024
Project Contact:	Molly McGuire, Planner molly.mcguire@mercerisland.gov | (206) 275-7712	