Altmann Oliver Associates, LLC
AOA
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509
Environmental Planning & Landscape Architecture

January 27, 2025

AOA-6656

Jon Tellefson
mt1231@gmail.com

SUBJECT: **Stream Buffer Reduction and Enhancement for Forest Creek Lot 1 5222 Forest Ave SE, Parcel 141030-0057, Mercer Island, WA Revised (City File # CAO24-032)**

Dear Jon:

We have updated this report and attached plan set per the comments presented in the January 7, 2025 review letter from the City of Mercer Island. Revisions requested included: 1) removal of reduced buffer from Stream 1 on Figure 2 of plan set, 2) clarification that no intrusion into the building setback of Stream 1 with any structure will occur, 3) clarify text in report that no buffer reduction from Stream 1 is proposed, and 4) removal of tree plantings within Forest Ave. right-of-way (only shrubs will be planted in right-of-way).

## 1.0 BACKGROUND AND EXISTING CRITICAL AREAS

On January 5, 2023 AOA conducted an initial wetland and stream reconnaissance and delineation on the adjacent property to the north and east of the subject property (i.e., Lot 2 Parcel 141030-0059). The reconnaissance was conducted utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).*

No wetlands were identified on or adjacent to Parcel -0059 (Lot 2) during the initial field investigation. One stream (Stream 1) was observed draining from south to north within the central portion of Lot 2 and the northeastern portion of Lot 1. The ordinary high water (OHW) of the stream was delineated during the field investigation and subsequently surveyed (see survey drawing).

On May 17, 2024 a second field investigation was conducted to: 1) confirm that there are no wetlands on Lot 1 and that the surveyed delineation of Stream 1 remains valid, and 2) delineate the OHW of the east side of an off-site stream located to the west of Lot 1. During the May 2024 review, the lack of wetlands on Lot 1 was confirmed and the surveyed delineation remains valid. The off-site stream to the

west (Stream 2) was also subsequently surveyed and is now depicted on the survey drawing.

**Attachment A** contains a data sheet prepared for a representative location in the uplands on Lot 1. This data sheet documents the vegetation, soils, and hydrology information that aided in the no wetland determination for the property.

## 1.1 Stream 1

The stream in the northeastern portion of Lot 1 is located within a well-defined channel and is considered a Type Np stream by the City of Mercer Island that requires a 60-foot buffer per MIMC 19.07.180.C.1. An additional 10-foot structure setback from the buffer is required per MIMC 19.07.180.C.7.

## 1.2 Stream 2

The stream off-site to the west of Lot 1 is also considered a Type Np stream by the City of Mercer Island that requires a 60-foot buffer per MIMC 19.07.180.C.1 and an additional 10-foot structure setback from the buffer is required per MIMC 19.07.180.C.7. Based on the survey drawing, this buffer and structure setback encroaches into the southwest corner of Lot 1.

## 2.0 PROPOSED PROJECT IMPACTS

The standard 60-foot watercourse buffer from Stream 2 currently extends into the southwest portion of the site and the required location of the proposed residence. A reduced buffer is proposed for Stream 2. No buffer reduction is proposed for Stream 1

## 2.1 Proposed Buffer Reduction

The City of Mercer Island allows for the reduction of a watercourse buffer if all of the criteria in MICC 19.07.180.C.5 are met.

*Buffer width reduction shall be allowed provided the following requirements are met:*

a. *The applicant has demonstrated that buffer averaging would not feasibly allow development*;

Stream 2 is located off-site and there are no areas on the property that are available or suitable for buffer replacement.

b. *The applicant has demonstrated how impacts will be minimized and that avoidance has been addressed consistent with section 19.07.100, mitigation sequencing*;

Since the site is highly constrained by the buffer from Stream 1, it is not possible to shift the house east and avoid the 60-foot standard buffer from Stream 2. Impacts to the buffer have been minimized to the extent feasible (see Section 2.2 below for mitigation sequencing).

*c. The applicant has demonstrated how all proposed impacts have been mitigated consistent with subsection E of this section and will not result in a loss of ecological function;*

The current Stream 2 buffer on the site and immediately adjacent to the western property line within the right-of-way is vegetated primarily by invasive Himalayan blackberry (*Rubus armeniacus*) and English ivy (*Hedera helix*). Native significant vegetation is generally limited to two Douglas fir (*Pseudotsuga menziesii*) trees that will be preserved as part of the project. The existing buffer does not provide a significant functional benefit to the off-site watercourse. We have prepared a buffer enhancement plan (**Figures 1 through 5**) that will increase the plant species and structural diversity of the watercourse buffer over current conditions. There will be no loss of ecological function as part of the project.

d. *The proposed buffer width is not less than 75 percent of the standard buffer width at any point; and*

The Stream 2 watercourse buffer will be reduced from 60 feet to 45 feet in places and will not be less than 75% of the standard buffer.

e. *The proposed buffer reduction is not proposed in conjunction with buffer averaging*.

Buffer averaging is not proposed.

**2.2 Mitigation Sequencing**

The City of Mercer Island requires per MICC 19.01.100 that *an applicant for a development proposal or activity shall implement the following sequential measures, listed below in order of preference, to avoid, minimize, and mitigate impacts to environmentally critical areas and associated buffers. Applicants shall document how each measure has been addressed before considering and incorporating the next measure in the sequence:*

A. *Avoiding the impact altogether by not taking a certain action or parts of an action. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. However, avoidance shall not be construed to mean mandatory withdrawal or denial of the development proposal or activity if the proposal or activity is an allowed, permitted, or conditional use in this title. In determining the extent to which the proposal should be redesigned to avoid the impact, the code official may consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal and identified changes to the proposal. Development proposals should seek to avoid, minimize and mitigate overall impacts based on the functions and values of all of the relevant critical areas and based on the recommendations of a critical area study. If impacts cannot be avoided through redesign, use of a setback deviation pursuant to Section 19.06.110(C), or because of site conditions or project requirements, the applicant shall then proceed with the sequence of steps in subsections B through E of this section*;

Due to the constraints associated with the buffer in the eastern portion of the site adjacent Stream 1, it is not possible to shift the proposed house east outside of the 60-foot Stream 2 buffer.

B. *Minimizing impacts by limiting the degree or magnitude of the action and its implementation, using a setback deviation pursuant to Section 19.06.110(C), using appropriate technology, or by taking affirmative steps to avoid or reduce impacts*;

The proposed project would not reduce the buffer adjacent to any significant native vegetated areas and would only reduce the Stream 2 buffer in one small area in the vicinity of the existing access drive.

C. *Rectifying the impact by repairing, rehabilitating, or restoring the affected environment*;

The existing preserved buffer in the far western portion of the site and the adjacent right-of-way in the vicinity of the preserved trees would be restored with native plantings. Tree protection and construction limit fencing will be installed as required.

D. *Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action*;

The native plantings would be preserved in the buffer in perpetuity and the area maintained for a minimum of 5 years as part of an established monitoring and maintenance program.

*E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or*

Although the area of proposed buffer impact is currently degraded and does not provide a significant functional benefit to the watercourse, we have prepared a compensatory mitigation planting plan (**Figures 1 through 5**) that will increase the habitat functions of the watercourse buffer over current conditions. It is our understanding that the City of Mercer Island does not want trees planted in the right-of-way so the enhancement plan focusses on shrubs in that area.

F. *Monitoring the impact and taking appropriate corrective measures to maintain the integrity of compensating measures*.

A 5 year monitoring program has been developed to ensure success of the proposed buffer enhancement plan.

## 3.0 PROPOSED BUFFER MITIGATION

A watercourse buffer enhancement plan has been prepared for the Stream 2 buffer reduction. As part of the mitigation plan, all remaining degraded portions of the watercourse buffer on the site and within the adjacent preserved right-of-way would be enhanced by the removal of non-native invasive species (i.e., blackberry and English ivy) and re-planted with native vegetation.

The proposed plantings have been designed to increase the plant species and structural diversity within the buffer and to provide additional physical and visual screening to the watercourse from the residence. Increasing the plant species and structural diversity within the buffer would also increase the wildlife habitat of the area over current conditions.

**3.1 Goal, Objective, and Performance Standard for Enhancement Area**

The primary goal of the enhancement plan is to restore and enhance the watercourse buffer with native vegetation. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the enhancement area.
Performance Standard: There will be 100% survival of all planted species throughout the enhancement area at the end of the first year of planting. Following Year 1, success will be based on an 80% survival rate or areal cover of planted or recolonized native species of 15% after Year 1, 25% after Year 2, 40% after Year 3, and 60% after Year 5.

Objective B: Limit the amount of invasive and exotic species within the enhancement area.
Performance Standard: After installation and at the end of the fifth year after planting, exotic and invasive plant species will be maintained at levels below 10% total cover in all planted areas.

**3.2 Monitoring Methodology**

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City of Mercer Island.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress of plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of the success of the plan.

**3.3 Maintenance**

Maintenance will be conducted on a routine, year round basis. Additional maintenance needs will be identified and addressed following a twice-yearly maintenance review. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner. Tall grasses and weeds shall be removed at the base of plants to prevent engulfment. Weed control should be performed by hand removal.

**3.4 Contingency**

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after the reason for failure has been identified (e.g., moisture regime, poor plant stock,

disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Mercer Island, or the owner.

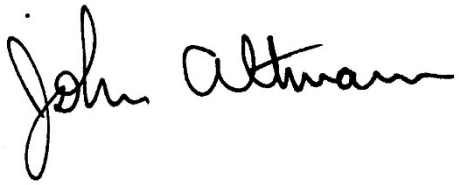
**3.5 As-built**

Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Mercer Island. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC



John Altmann
Ecologist

Attachments

STREAM 2
TYPE NP
60' STANDARD
BUFFER
45' REDUCED
BUFFER

HOUSE
FF EL=139.37

DECK

ST

GARAGE

CS

COLLAPSED
WELL HOUSE

15' PRIVATE DRAINAGE EASEMENT

FOREST AVE.

LOT 1

LOT 2

10'

45'

60'

GRAVEL DRIVEWAY

WOOD WALL

W END BOARD FENCE
AT S PROPERTY LINE

W END SPLIT RAIL FENCE
AT E END BOARD FENCE

10' SANITARY SEWER
ESMT. REC. NO. 5820490

SPLIT RAIL FENCE

SPLIT RAIL FENCE DILAPIDATED TO S

STREAM 1
TYPE NP
60' STANDARD BUFFER

W 3-9
OHW 3-8
OHW 3-7
OHW 3-6
OHW 3-5
OHW 3-4
OHW 3-3
OHW 3-2
OHW 3-1
OHW 2-1
OHW 2-2

WF 1-1
WF 1-2
WF 1-3
WF 1-4
WF 1-5
WF 1-6
WF 1-7
WF 1-8
WF 1-9
WF 1-10
WF 1-11
WF 2-1
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WF 2-31
WF 2-32
WF 2-33

## PLAN LEGEND

- PROPERTY LINE
- OHW TYPE NP STREAMS
- 60' STANDARD BUFFER
- 45' REDUCED BUFFER FOR STREAM 2
- 10' STRUCTURE SETBACK
- 10' STRUCTURE SETBACK FOR REDUCED BUFFER

GRAPHIC SCALE
(IN FEET)

0 10 20 30 40 60

SCALE: 1:20

N

## NOTES

1. BASE INFORMATION PROVIDED BY MEAD GILMAN LAND SURVEYORS P.O.BOX 289, WOODINVILLE, WA 98072, 425.486.1252

PROJECT 6656
DRAWN SO
SCALE AS NOTED
DATE 8-23-24
REVISED 01-27-25
1/5

FIGURE 1: EXISTING CONDITIONS
SEASCAPE HOMES
FOREST AVE - BUFFER MITIGATION PLAN
MERCER ISLAND, WASHINGTON
PARCEL 1410300057

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STREAM 2
TYPE NP
60' STANDARD
BUFFER
45' REDUCED
BUFFER

EAVE
LINE - NO
STRUCTURE
IN BSBL

FOREST AVE.

FOREST AVE.

STREAM 1
TYPE NP
60' STANDARD BUFFER

10' SANITARY SEWER
ESMT. REC. NO. 5820490.

OHW 3-1
OHW 3-2
OHW 3-3
OHW 3-4
OHW 3-5
OHW 3-6
OHW 3-7
OHW 3-8
OHW 3-9
OHW 2-1
OHW 2-2
OHW 2-3

WF 1-1
WF 1-2
WF 1-3
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WF 2-16
WF 2-17
WF 2-18
WF 2-21

5121

18
17
16

## PLAN LEGEND

- PROPERTY LINE
- OHW TYPE NP STREAMS
- 60' STANDARD BUFFER
- 45' REDUCED BUFFER
- PROPOSED BUFFER
- 10' STRUCTURE SETBACK
- 10' STRUCTURE SETBACK FOR REDUCED BUFFER

## MITIGATION LEGEND

| | |
|---|---|
| BUFFER ENHANCEMENT - HAND REMOVE HIMALAYAN BLACKBERRY AND ENGLISH IVY AROUND EXISTING SNOWBERRY, SWORD FERN, TALL OREGON GRAPE, AND DOUGLAS FIR. REPLANT AT 75% PLANTING DENSITY | 1,375 SF |
| BUFFER REPLACEMENT WITH ENHANCEMENT - PLANT AT 100% PLANTING DENSITY | 934 SF |

GRAPHIC SCALE
(IN FEET)
0 10 20 30 40 60
SCALE: 1:20

N

## NOTES

1. BASE INFORMATION PROVIDED BY MEAD GILMAN LAND SURVEYORS P.O.BOX 289, WOODINVILLE, WA 98072, 425.486.1252

FIGURE 2: SITE PLAN
SEASCAPE HOMES
FOREST AVE - BUFFER MITIGATION PLAN
MERCER ISLAND, WASHINGTON
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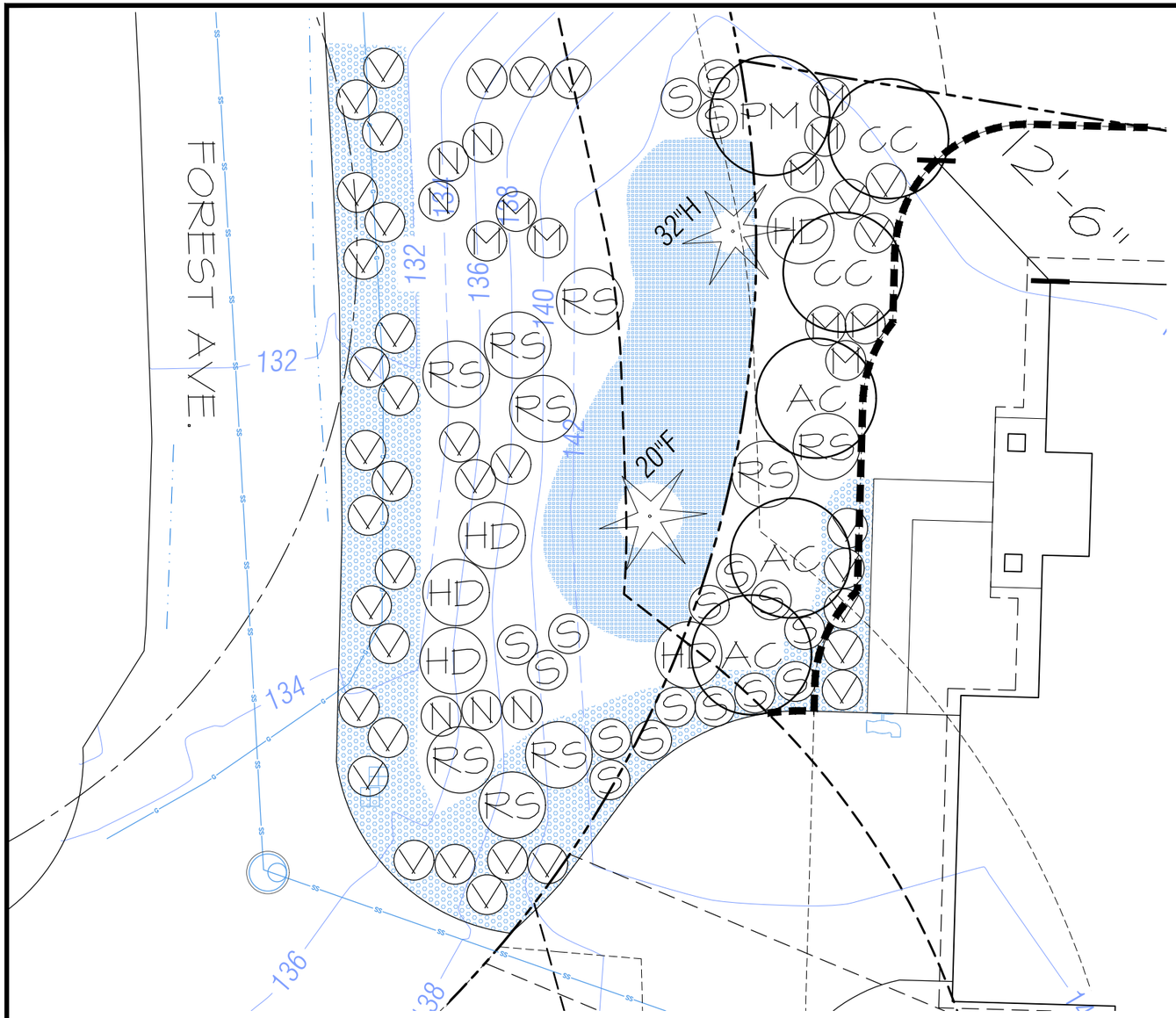


## PLANT LIST (SEE FIGURE 4 FOR SCHEDULE)

### TREES

| KEY | COMMON NAME |
|---|---|
| AC | VINE MAPLE |
| CC | WESTERN HAZELNUT |
| PM | DOUGLAS FIR |
| RP | CASCARA |

### SHRUBS

| KEY | COMMON NAME |
|---|---|
| HD | OCEAN SPRAY |
| M | TALL OREGON GRAPE |
| RS | RED FLOWERING CURRANT |
| N | NOOTKA ROSE |
| S | SNOWBERRY |
| V | EVERGREEN HUCKLEBERRY |

### GROUNDCOVER

| KEY | COMMON NAME |
|---|---|
| | COAST STRAWBERRY |
| | SALAL |

GRAPHIC SCALE
(IN FEET)

0 5 10 15 20 30

SCALE: 1:10

N

## NOTES

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FIGURE 2: SITE PLAN
SEASCAPE HOMES
FOREST AVE - BUFFER MITIGATION PLAN
MERCER ISLAND, WASHINGTON
PARCEL 1410300057

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# PLANT SCHEDULE

## TREES

| KEY | SCIENTIFIC NAME | COMMON NAME | SPACING | QTY | SIZE (MIN.) | NOTES |
|---|---|---|---|---|---|---|
| AC | ACER CIRCINATUM | VINE MAPLE | 9' O.C. | 3 | 2 GAL. | MULTI-STEM (3 MIN.) |
| CC | CORYLUS CORNUTA | WESTERN HAZELNUT | 9' O.C. | 2 | 2 GAL. | MULTI-STEM (3 MIN.) |
| PM | PSEUDOTSUGA MENZIESII | DOUGLAS FIR | 9' O.C. | 1 | 2 GAL. | FULL & BUSHY |

## SHRUBS

| KEY | SCIENTIFIC NAME | COMMON NAME | SPACING | QTY | SIZE (MIN.) | NOTES |
|---|---|---|---|---|---|---|
| HD | HOLODISCUS DISCOLOR | OCEAN SPRAY | 5' O.C. | 7 | 1 GAL. | MULTI-STEM (3 MIN.) |
| M | MAHONIA AQUIFOLIUM | TALL OREGON GRAPE | 3' O.C. | 12 | 1 GAL. | FULL & BUSHY |
| RS | RIBES SANUINEUM | RED FLOWERING CURRANT | 5' O.C. | 12 | 1 GAL. | MULTI-STEM (3 MIN.) |
| N | ROSA NUTKANA | NOOTKA ROSE | 3' O.C. | 9 | 1 GAL. | MULTI-STEM (3 MIN.) |
| S | SYMPHORICARPOS ALBUS | SNOWBERRY | 3' O.C. | 20 | 1 GAL. | MULTI-STEM (3 MIN.) |
| V | VACCINIUM OVATUM | EVERGREEN HUCKLEBERRY | 3' O.C. | 37 | 1 GAL. | FULL & BUSHY |

## GROUNDCOVER

| KEY | SCIENTIFIC NAME | COMMON NAME | DENSITY | QTY | SIZE (MIN.) | NOTES |
|---|---|---|---|---|---|---|
| | FRAGARIA CHILOENSIS | COAST STRAWBERRY | 2' O.C. | 75 | 1 GAL. | FULL & BUSHY |
| | GAULTHERIA SHALLON | SALAL | 2' O.C. | 35 | 1 GAL. | FULL & BUSHY |

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FIGURE 4: PLANT SCHEDULE
SEASCAPE HOMES
FOREST AVE - BUFFER MITIGATION PLAN
MERCER ISLAND, WASHINGTON
PARCEL 1410300057

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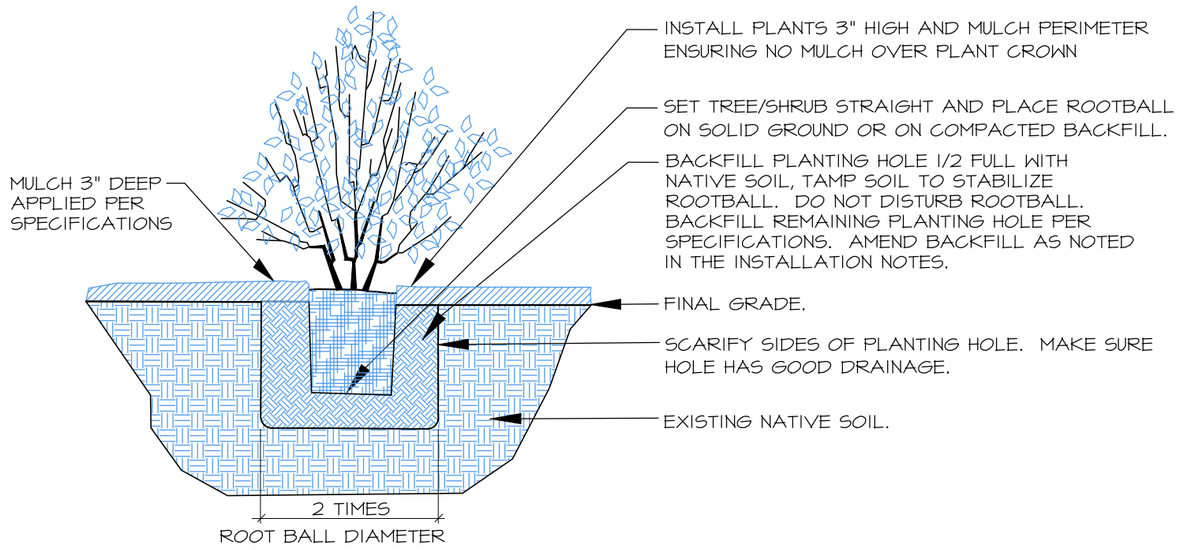
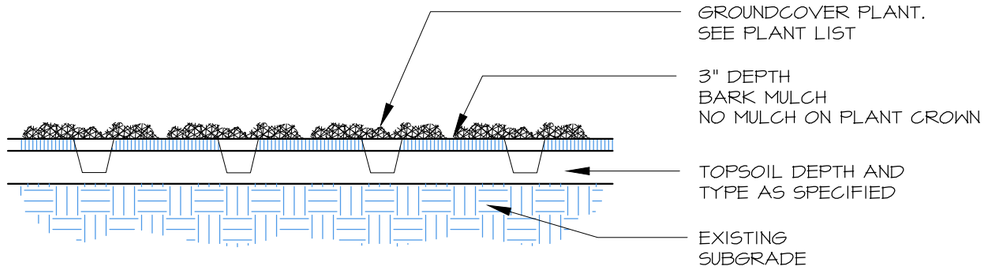



## 1 CONTAINER TREE/SHRUB PLANTING (TYP.)

SCALE: NTS




## 2 GROUNDCOVER PLANTING (TYP.)

SCALE: NTS

## SPECIFICATIONS

1. PRIOR TO PLANTING, ALL NON-ORGANIC DEBRIS AND NON-NATIVE, INVASIVE VEGETATION SHALL BE HAND-REMOVED AND EXPORTED OFF SITE.
2. PRIOR TO PLANTING, ALL NON-NATURAL MATERIALS SHALL BE REMOVED (GRAVEL, ROCK, CONCRETE) FROM EXISTING CLEARED AREAS. A 4" LIFT OF IMPORTED CEDAR GROVE 3-WAY TOPSOIL SHALL BE PLACED AND LIGHTLY RAKED INTO THE TOP 4" OF SUBGRADE PRIOR TO PLANTING.
3. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH.
4. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PLANTS SHALL BE INSTALLED 2" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH HOG-FUEL PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
5. ALL PLANTS SHALL BE NURSERY GROWN (IN W. WA OR OR.) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
6. LANDSCAPE CONTRACTOR TO INSTALL DRIP OR LOW-FLOW IRRIGATION SYSTEM CAPABLE OF HEAD TO HEAD COVERAGE OF ALL PLANTINGS.
7. ALL PLANTINGS SHALL BE IRRIGATED AT A RATE OF ½" OF FLOW 2-3 TIMES WEEKLY, FROM JUNE 15-OCT 15 THE FIRST YEAR AFTER PLANTING. THE SECOND YEAR, FLOW SHOULD BE REDUCED TO PROVIDE ½" OF FLOW 1-2 TIMES WEEKLY FROM JULY 1-SEPT 30. THE SYSTEM CAN BE REMOVED AFTER 3 YEARS.
8. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, MERCER ISLAND WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
9. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.
10. MONITORING AND MAINTENANCE SHALL BE COMPLETED IN MARCH, MAY JULY AND SEPTEMBER PER THE APPROVED STREAM BUFFER REDUCTIONS AND ENHANCEMENT REPORT PREPARED BY AOA.

ANNUAL MAINTENANCE SCHEDULE

| MAINTENANCE ITEM | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WEED CONTROL | | | 1 | | 1 | | 1 | | 1 | | | |
| GENERAL MAINT. | | | 1 | | 1 | | 1 | | 1 | | | |
| WATERING - YEAR 1 | | | | | | 4-6 | 8-12 | 8-12 | 8-12 | 4-6 | | |
| WATERING - YEAR 2 | | | | | | | 4-8 | 4-8 | 4-8 | | | |

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

MAINTENANCE WILL INCLUDE:

1. REMOVAL OF NON-NATIVE PLANTS, BY HAND, AS LISTED ABOVE.
2. CONTINUED APPLICATION OF IRRIGATION, AS NOTED ABOVE.
3. REMOVAL OF PEST INFESTATIONS, LIKE TENT CATERPILLAR AND SPRUCE APHID.
4. THINNING OF RED ALDER AND MOWING OF TALL GRASSES, AS DIRECTED BY AOA TO ENSURE SURVIVAL OF PLANTED SPECIES.

PROJECT 6656
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SCALE AS NOTED
DATE 8-23-24
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5/5

FIGURE 5: PLANTING DETAILS & SPECIFICATIONS
SEASCAPE HOMES
FOREST AVE - BUFFER MITIGATION PLAN
MERCER ISLAND, WASHINGTON
PARCEL 1410300057

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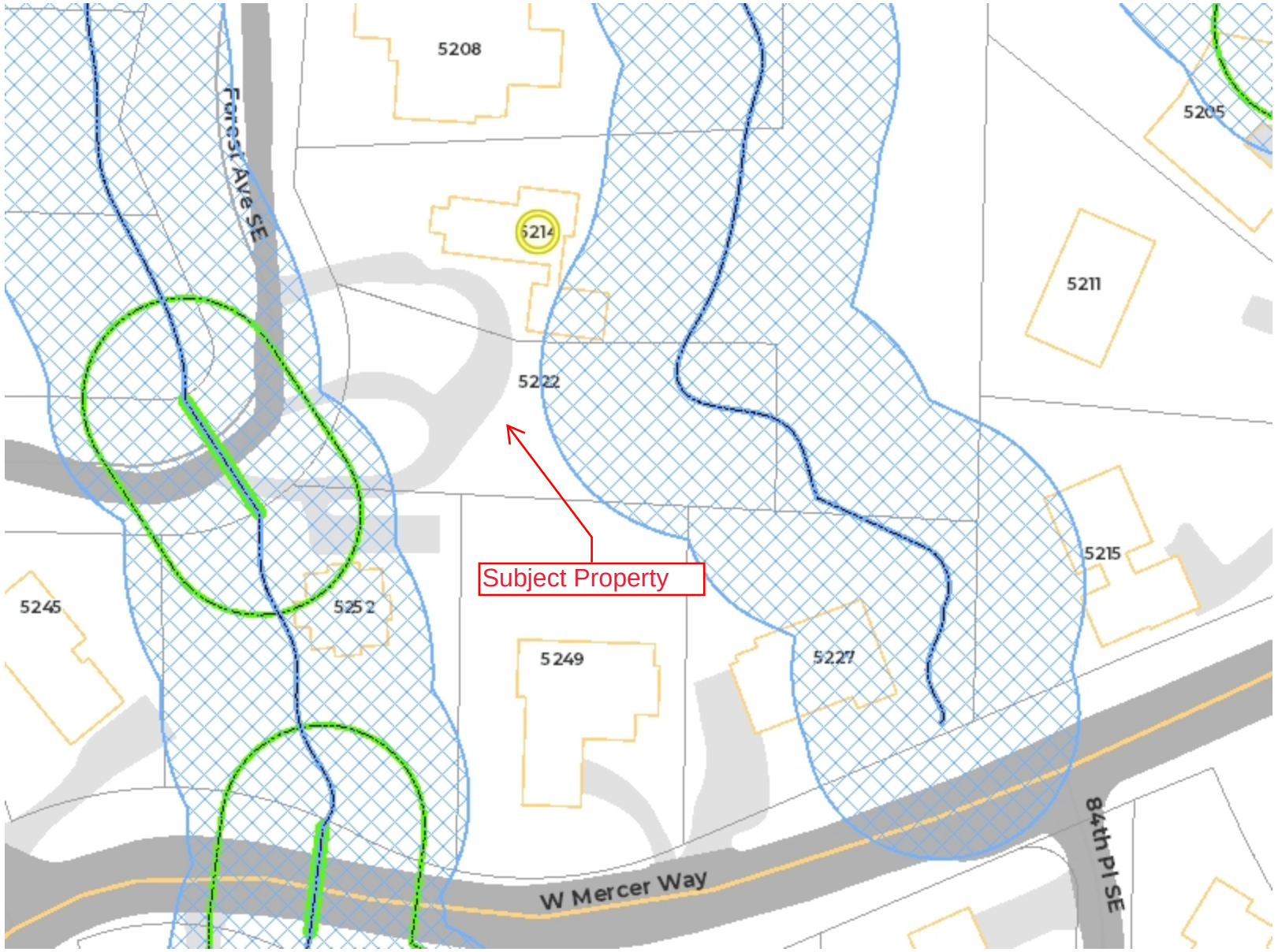
# City of Mercer Island

Information & Geographic Services



## Legend

- Unpiped Watercourse
  - Type "F" = Fish
  - Type "Np" = Non-Fish
  - Type "Ns" = Non-Fish Seasonal
  - Type "Np" (Unverified)
  - Type "Ns" (Unverifed)
- Piped Watercourse
- Watercourse Buffer/Setback
  - Type "F" = 120-Ft Buffer
  - Type "Np" = 60-Ft Buffer
  - Type "Ns" = 60-Ft Buffer
  - Type "Np" Unverifed = 60-Ft Buffer
  - Type "Ns" Unverified = 60-Ft Buffer
  - Piped Type F/Np/Ns = 45-Ft Setbac
- Address
- Building
- Property Line
- Docks
- Freeway
- Major Street
- Street
- Paved Driveway
- Paved Road
- Paved Parking Area
- Parks
- Lake Washington

0 67 134 Feet

1 inch = 133.6960385 feet

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Map Printed: June 13, 2024

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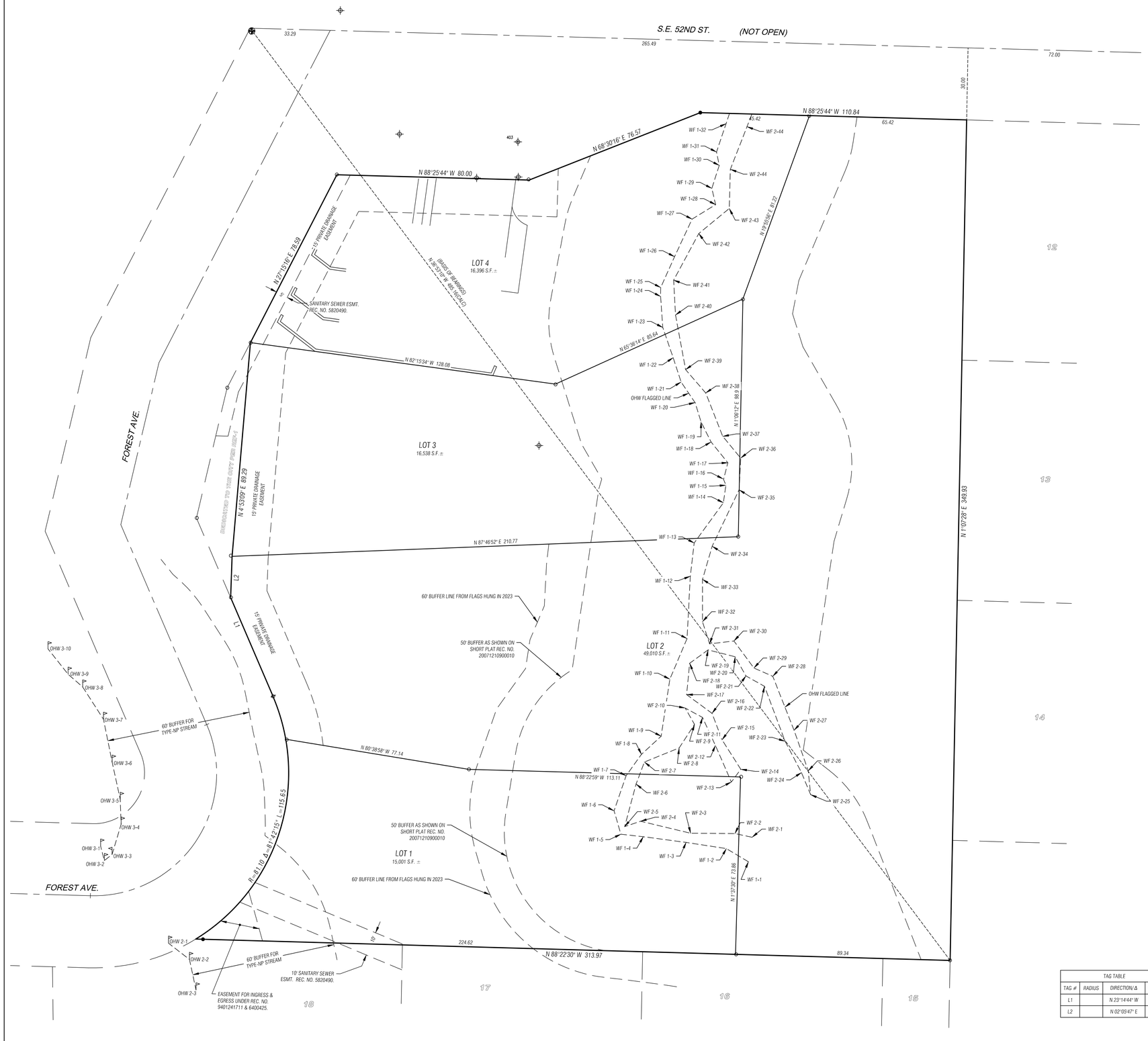
**Notes**

# SE1/4, NE1/4, SEC. 24, TWP. 24 N., RGE. 4 E., W.M.




| TAG TABLE | | | |
|---|---|---|---|
| TAG # | RADIUS | DIRECTION/Δ | LENGTH |
| L1 | | N 23°14'44" W | 44.63 |
| L2 | | N 02°05'47" E | 17.18 |

0 20 40

SCALE: 1" = 20'

## MERIDIAN

STATE PLANE COORDINATE SYSTEM - NORTH ZONE NAD83 (2011)
BASED ON RAPID STATIC GPS MEASUREMENTS WITH OPUS SOLUTION.

## VERTICAL DATUM

NAVD 88 (GEOID 18)
BASED ON RAPID STATIC GPS MEASUREMENTS WITH OPUS SOLUTION.

## BENCHMARKS

TBM-A
FOUND 4"X4" CONC MON WITH 2" BRASS DISC " LS#2534" WITH PUNCH 0.3' BELOW GRADE IN CASE 69.6' NW OF NW PROP CORNER.
ELEV. = 104.53'

TBM-B
FOUND 1/2" REBAR AND MGA CONTROL CAP AT W SIDE FOREST DRIVE , 0.5'W OF WEST EDGE ASPHALT PAVEMENT AND 13.5'W OF CB-5078 .
ELEV. = 113.94'

## NOTES

1. A 5" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY. ALL EQUIPMENT HAS BEEN MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES. ACCURACY MEETS OR EXCEEDS W.A.C. 332-130-090.
2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME. ALL CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN FEBRUARY 18, 2020, UNLESS OTHERWISE NOTED.
4. UNDERGROUND UTILITIES WERE LOCATED BASED ON SURFACE EVIDENCE (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS, ETC.) . THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION, AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. TREE SIZES AND SPECIES WERE DETERMINED TO THE BEST OF OUR ABILITY. MEAD GILMAN AND ASSOCIATES DOES NOT WARRANT THE ACCURACY OF THE SIZE AND SPECIES OF ANY TREES SHOWN HEREON. ALL TREE SIZES SHOULD BE VERIFIED BY A TRAINED ARBORIST.
6. THIS MAP DOES NOT TO INTEND SHOW ALL EASEMENTS OF RECORD.
7. ALL CONTOUR INFORMATION EAST OF THE NATIVE GROWTH PROTECTION AREA BOUNDARY WAS GENERATED FROM PUBLIC LIDAR DATA.
8. FLAGS AT OHW ARE SET BY ALTMANN OLIVER ASSOCIATES, LLC IN JANUARY OF 2023
9. THIS UPDATE TO THE TOPOGRAPHIC SURVEY IS INTENDED TO JUST SHOW THE NEW BUFFER AND ORDINARY HIGH WATER FLAGS. NO ATTEMPT TO UPDATE ANY OTHER ASPECT OF THE MAP HAS BEEN DONE.

## LEGAL DESCRIPTION

LOTS 1-4, KNUTSON SHORT PLAT, MERCER ISLAND SHORT PLAT NO SUB07-003 AS RECORDED UNDER REC. NO. 20071210900010.

## REFERENCES

1. ROS REC. NO. 20071210001864, VOL. 236, PG. 232.
2. MERCER ISLAND SHORT PLAT NO SUB07-003, REC. NO. 2007121090001.

## LEGEND

- SET 1/2" X 24' REBAR WITH YELLOW PLASTIC CAP STAMPED "MGA 35145 48383"
- FOUND CORNER
- FOUND MONUMENT
- TEMPORARY BENCHMARK
- GAS VALVE
- ELECTRICAL JUNCTION BOX
- UTILITY POLE
- CATCH BASIN - TYPE I
- CATCH BASIN - TYPE II
- STORM CLEANOUT
- YARD DRAIN
- SEWER MANHOLE
- FIRE HYDRANT
- HOSE BIB
- WATER METER
- WATER VALVE
- BOLLARD
- SIGN
- SOIL TEST PIT
- CONIFEROUS TREE
- DECIDUOUS TREE
- ASPHALT
- FENCE LINE
- OHP — OVERHEAD POWER LINES
- SS — SANITARY SEWER LINE
- SD — STORM DRAIN LINE
- G — GAS LINE
- W — WATER MAIN
- ASPHALT HATCH
- CONCRETE HATCH
- DECK HATCH
- GRAVEL HATCH

C CEDAR
D DECIDUOUS
E ELM
H HEMLOCK
M MAPLE

CS CONC SLAB
FF FINISH FLOOR
FL FLOW LINE/ ASPH THICKENED EDGE
ST STAIRS
WF# WETLAND FLAG NUMBER
OHW FLAGED OVERHEAD WATER LINE

CHRISTOPHER SHANE KNUTSON
STATE OF WASHINGTON
35145
REGISTERED
PROFESSIONAL LAND SURVEYOR


MEAD GILMAN
LAND SURVEYORS
P.O. BOX 289, WOODINVILLE, WA 98072 | PHONE: (425) 486-1252 | WWW.MEADGILMAN.COM


# FOREST AVE LOTS
BOUNDARY & TOPOGRAPHIC SURVEY

SEASCAPE HOMES
PO BOX 40568
BELLEVUE WA 98015

| | |
|---|---|
| DRAWN BY: | LSD |
| REVIEWED BY: | CSB |
| DATE: | 03-11-2020 |
| JOB NO. | 20011 |
| SHEET | 1 OF 1 |

# King County iMap

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Date: 6/19/2024 Notes:

N

King County

# ATTACHMENT A
# DATA SHEETS

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Parcel 141030-0057 City/County: Mercer Island/ Sampling Date: 5-17-24
Applicant/Owner: Tellefson State: WA Sampling Point: DP#1
Investigator(s): John Altmann, Dain Altmann, Jason Panzera Section, Township, Range: S24,T24N,R4E
Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): ____
Subregion (LRR): A Lat: 47.5556 Long: -122.22801 Datum: ____
Soil Map Unit Name: AgC NWI classification: ____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☐ | No ☒ | **Is the Sampled Area within a Wetland?** | **Yes** ☐ | **No** ☒ |
| Hydric Soil Present? | Yes ☐ | No ☒ | | | |
| Wetland Hydrology Present? | Yes ☐ | No ☒ | | | |

Remarks: Upland plot, see map for location.

**VEGETATION – Use scientific names of plants**

| Tree Stratum (Plot size: 10) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Thuja plicata* | 100 | yes | FAC |
| 2. ____ | ____ | ____ | ____ |
| 3. ____ | ____ | ____ | ____ |
| 4. ____ | ____ | ____ | ____ |
| 50% = 50, 20% = 20 | 100 | = Total Cover | |
| **Sapling/Shrub Stratum (Plot size: 10)** | | | |
| 1. *Mahonia nervosa* | 40 | yes | FACU |
| 2. *Oemleria cerasiformis* | 40 | yes | FACU |
| 3. *Ilex aquifolium* | 20 | yes | FACU |
| 4. ____ | ____ | ____ | ____ |
| 5. ____ | ____ | ____ | ____ |
| 50% = 50, 20% = 20 | 100 | = Total Cover | |
| **Herb Stratum (Plot size: 10)** | | | |
| 1. *Polystichum munitum* | 10 | yes | FACU |
| 2. ____ | ____ | ____ | ____ |
| 3. ____ | ____ | ____ | ____ |
| 4. ____ | ____ | ____ | ____ |
| 5. ____ | ____ | ____ | ____ |
| 6. ____ | ____ | ____ | ____ |
| 7. ____ | ____ | ____ | ____ |
| 8. ____ | ____ | ____ | ____ |
| 9. ____ | ____ | ____ | ____ |
| 10. ____ | ____ | ____ | ____ |
| 11. ____ | ____ | ____ | ____ |
| 50% = 5, 20% = 2 | 10 | = Total Cover | |
| **Woody Vine Stratum (Plot size: 10)** | | | |
| 1. *Vinca minor* | 10 | yes | NL (UPL) |
| 2. ____ | ____ | ____ | ____ |
| 50% = 5, 20% = 2 | 10 | = Total Cover | |

% Bare Ground in Herb Stratum ____

**Dominance Test Worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | ____ | x1 = | ____ |
| FACW species | ____ | x2 = | ____ |
| FAC species | ____ | x3 = | ____ |
| FACU species | ____ | x4 = | ____ |
| UPL species | ____ | x5 = | ____ |
| Column Totals: | ____ (A) | | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

☐ 1 – Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** **Yes** ☐ **No** ☒

Remarks:

Project Site: Parcel 141030-0057

## SOIL

Sampling Point: DP#1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10YR3/6 | 100 | | | | | silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type:

Depth (inches):

**Hydric Soils Present?** **Yes** ☐ **No** ☒

Remarks: no redoximorphic features

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1) **(LRR A)**
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) **(LRR A)**
- ☐ Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

**Wetland Hydrology Present?** **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: dry