City of Bellevue
Development Services Department
Land Use Staff Report

Proposal Name:	Olteanu Residence
Proposal Address:	807 128th Ave SE
Proposal Description:	Critical Areas Land Use Permit, Shoreline Substantial Development Permit, and Variance to the Shoreline Master Program approval for a proposal to construct a 3,975 square-foot single-family residence, pool, patios, and driveway within a wetland, 110-foot wetland buffer, 100-foot stream buffer, and their respective structure setbacks. The proposal is supported by a Critical Areas Report.
File Number:	21-122594-LO, 22-100962-LS, and 22-100963-WG
Applicant:	Adrian Olteanu
Decisions Included:	Critical Areas Land Use Permit (LUC 20.30P) Shoreline Variance (LUC 20.25E.190) Shoreline Substantial Development Permit (LUC 20.25E.160)
Planner:	David Wong, Land Use Planner
State Environmental Policy Act Threshold Determination:	**Exempt**
Department Decision:	**Approval with Conditions**

Elizabeth Stead

Elizabeth Stead, Land Use Director
Development Services Department

Application Dates:	October 22, 2021 (LO), January 21, 2022 (LS & WG)
Notice of Application Publication Dates:	December 9, 2021 (LO), March 17, 2022 (LS & WG)
CALUP Decision Publication Date:	May 4, 2023
CALUP Appeal Deadline:	May 18, 2023
SSDP and Variance Appeal:	21-days from date of filing with DOE

Per WAC 173-27-130, Approved Shoreline Substantial Development Permits are transmitted to the Department of Ecology concurrently with associated Shoreline Variances. A 21-day appeal period begins upon issuance of the Department of Ecology's decision. Appeal of Shoreline approvals is made to the Shoreline Hearings Board**.** For information on how to appeal the Critical Areas Land Use Permit, visit Development Services Center at City Hall or call (425) 452-6800. Appeal of the Critical Areas Land Use Permit decision must be made to the City of Bellevue City Clerk's Office by 5 p.m. on the date noted above.

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Attachments

1. Site Plan (Dated 12/05/22)
2. Mitigation Plan (Dated 07/06/22)
3. Critical Areas Report – Aquatica Environmental Consulting, LLC (Dated July 2022)

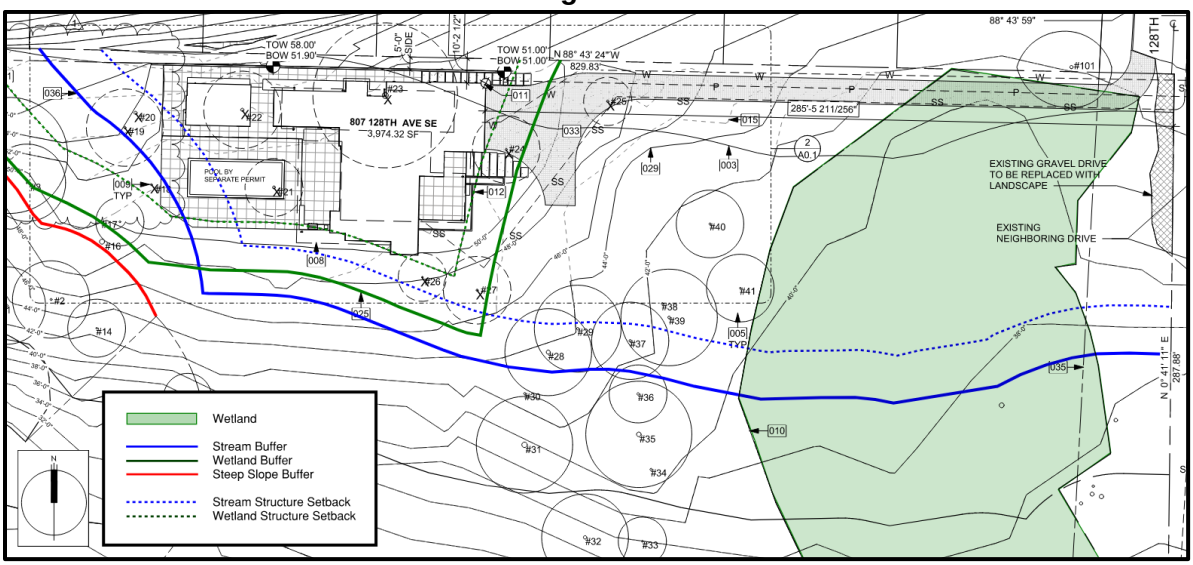
I. Request & Review Process

The applicant has requested a Critical Areas Land Use Permit (CALUP) to construct a 3,975 square-foot single-family residence, pool, patios, and driveway within the 110-foot wetland buffer, 100-foot Type-F stream buffer, and 20-foot wetland structure setback. The proposal requests modification of the code-required wetland buffer, stream buffer, and their respective structure setbacks to accommodate the new home, pool, patios, and driveway.

The applicant also requests a Shoreline Substantial Development Permit (SSDP) and Variance to the Shoreline Master Program to construct a driveway through a category III wetland associated with Lower Kelsey Creek. The site is located within the Urban Conservancy – Open Space shoreline designation, and the proposal requests allowance to fill a wetland subject to shoreline jurisdiction in order to construct a driveway accessing the proposed single-family home.

The proposal includes approximately 67,723 square feet of mitigation planting, enhancement planting, and invasive species removal to improve degraded conditions within the category III wetland, wetland buffers (category I and category III), and stream buffer See Figure 1 (derived from Attachment 1) for proposed site conditions.

Figure 1



Proposals to permanently modify a wetland buffer, stream buffer, or their respective structure setbacks require the approval of a Critical Areas Land Use Permit (CALUP) with Critical Areas Report (CAR) and are subject to the requirements of LUC 20.25H and 20.30P, including but not limited to those sections governing wetlands, streams, habitat, Critical Areas Reports (CAR), and mitigation.

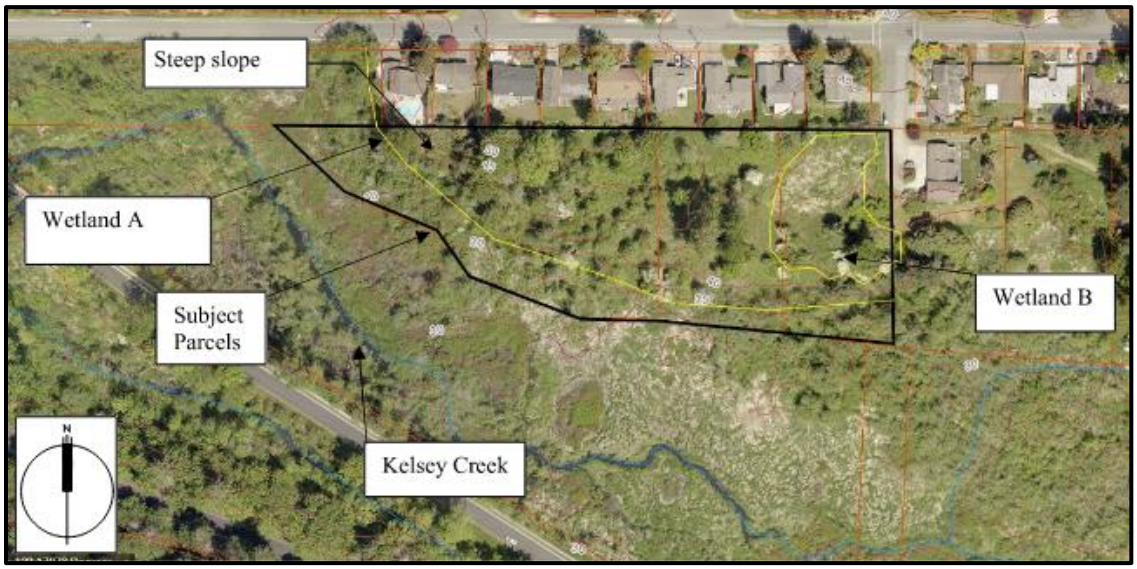
Proposals to permanently fill a category III wetland under shoreline jurisdiction requires the approval of a Shoreline Substantial Development Permit and a Variance to the Shoreline Master Program and are subject to the requirements and Decision Criteria of LUC 20.25E.

II. Site, Zoning, and Land Use Context and Critical Areas Functions and Values

A. Site Context

The subject lot is approximately 173,748 square feet in size and is currently undeveloped. The site was previously three separate parcels that were combined into one lot through a separate boundary line adjustment application (22-102874-LW) which was recorded in 2023. Two wetlands (category I and category III) are located along the south and east property lines. Kelsey Creek, a Type-F stream, is located off-site to the south, but portions of the buffer and 100-year floodplain associated with Kelsey Creek extend onto the property from the south property line. A steep slope containing approximately 15-20 feet of elevation change and with a southwest facing aspect is located in the western portion of the property. The site contains a variety of native and non-native vegetation, including but not limited to big-leaf maple (*Acer macrophyllum*), black cottonwood (*Populus trichocarpa*), willow (*Salix spp.*), non-native grass, and invasive woody species. Large areas of the wetland and stream buffers are dominated by non-native invasive species such as reed canary grass (*Phalaris arundinacea*) and Armenian blackberry (*Rubus bifrons*). See Figure 2 below for the current site**.**

Figure 2



B. Zoning

The property is zoned R-4 (Single-Family Residential) and is located within the Wilburton neighborhood area. See Figure 3 for zoning map and Figure 4 for neighborhood area information.

Figure 3

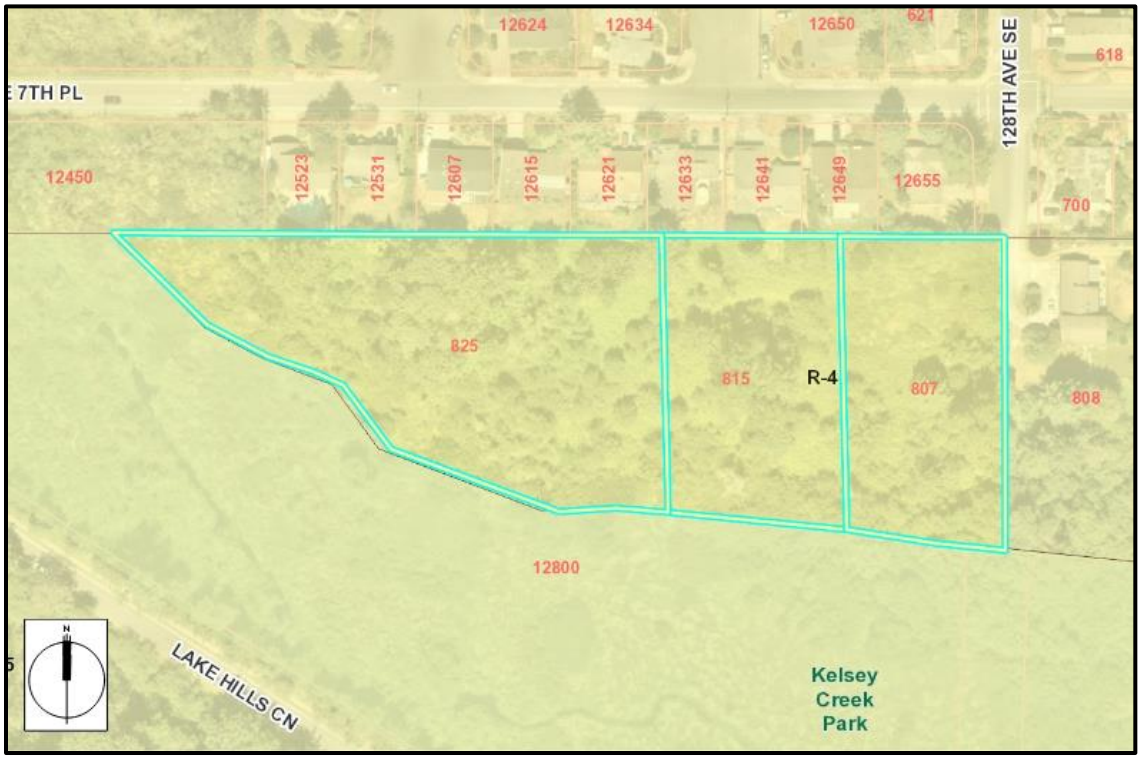


Figure 4

C. Land Use Context

The site and the adjacent residential lots to the north have a Comprehensive Plan designation of SF-H, or Single-Family High Density. The site is bordered by Kelsey Creek Park along the southern property line. International School (BISD) and Wilburton Hill Community Park are located in the vicinity to the north and northwest. See Figure 5 for Comprehensive Plan designation.

Figure 5

D. Shoreline Designation

Portions of the site are located within the Urban Conservancy – Open Space (UC-OS) Shoreline environment designation. The SMP identifies Lower Kelsey Creek, underlying lands, and territory between 200 feet on either side of the top of the banks, plus associated floodways, floodplains, and wetlands as within Shoreline Overlay District jurisdiction. The Category III wetland identified on the eastern portion of the site is within shoreline jurisdiction as it is connected to Lower Kelsey Creek. This wetland is in addition to the areas mapped by the City. See Figure 6 for Shoreline environmental designation and Figure 1 for Category III wetland.

Figure 6

E. Critical Areas and Shoreline Functions and Values

i. Streams and Riparian Areas

Most of the elements necessary for a healthy aquatic environment rely on processes sustained by dynamic interaction between the stream and the adjacent riparian area (Naiman et al., 1992). Riparian vegetation in floodplains and along stream banks provides a buffer to help mitigate the impacts of urbanization (Finkenbine et al., 2000 in Bolton and Shellberg, 2001). Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature (Brazier and Brown, 1973; Corbett and Lynch, 1985).

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams (Ecology, 2001; City of Portland 2001). The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods

(Novitzki, 1979; Verry and Boelter, 1979 in Mitsch and Gosselink, 1993). Upland and wetland areas can infiltrate flood flows, which in turn, are released to the stream as baseflow.

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi-canopy structure, snags, and down logs provide habitat for the greatest range of wildlife species (McMillan, 2000). Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated (May 2003). Until the newly planted buffer is established the near-term goals for buffer functions may not be attained.

Riparian areas often have shallow groundwater tables, as well as areas where groundwater and surface waters interact. Groundwater flows out of riparian wetlands, seeps, and springs to support stream baseflows. Surface water that flows into riparian areas during floods or as direct precipitation infiltrates into groundwater in riparian areas and is stored for later discharge to the stream (Ecology, 2001; City of Portland, 2001).

ii. Wetlands

Wetlands provide important functions and values for both the human and biological environment—these functions include flood control, water quality improvement, and nutrient production. These “functions and values” to both the environment and the citizens of Bellevue depend on their size and location within a basin, as well as their diversity and quality. While Bellevue’s wetlands provide various beneficial functions, not all wetlands perform all functions, nor do they perform all functions equally well (Novitski et al., 1995). However, the combined effect of functional processes of wetlands within basins provides benefits to both natural and human environments. For example, wetlands provide significant stormwater control, even if they are degraded and comprise only a small percentage of area within a basin.

iii. Shoreline Environment

The site is in the Shoreline Urban Conservancy – Open Space shoreline environment designation. Per LUC 20.25E.010, the Shoreline Urban Conservancy – Open Space environment is assigned to Bellevue shorelands with relatively high levels of existing ecological function for which existing and planned low-intensity development is compatible with maintaining or restoring ecological functions. Included are those areas where:

- Development activities and uses are confined to those activities that support low-intensity, dispersed recreation, or other low-intensity uses that are compatible with maintenance and restoration of shoreline ecological functions;

- Ecological functions are more intact than areas designated urban conservancy;

- Ecological function is high and ecological processes are mostly intact and there is obvious potential for shoreline ecological restoration; and

- Critical areas or cultural features are present that require heightened restrictions on use and development.

Shorelines provide a variety of functions including shade, temperature control, water purification, woody debris recruitment, channel, bank and beach erosion, sediment delivery, and terrestrial-based food supply (Gregory et al. 1991; Naiman et al. 1993; Spence et al.1996). Shorelines provide a wide variety of functions related to aquatic and riparian habitat, flood control and water quality, economic resources, and recreation, among others. Each function is a product of physical, chemical, and biological processes at work within the overall landscape. In lakes, these processes take place within an integrated system (ecosystem) of coupled aquatic and riparian habitats (Schindler and Scheuerell 2002). Hence, it is important to have an ecosystem approach which incorporates an understanding of shoreline functions and values.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The site is located within the R-4 zoning district. Single-family residences are allowed uses of the zoning district and are subject to the dimensional standards of LUC 20.20.010. See below for the applicable zoning dimensional standards.

Zoning Dimensional Standards – LUC 20.20.010			
Zoning District	R-4		
Gross Lot Area	173,748 square feet (3.99 acres)		
Dimensional Requirement	**Standard**	**Proposed**	**Complies?**
Front Yard Structure Setback (feet)	20	20	Complies
Rear Yard Structure Setback (feet)	20	20	Complies
Side Yard Structure Setback (feet)	5	5	Complies
Combined Two	15	15	Complies

Side Yards (feet)			
Maximum Lot Coverage (percent)	35*	31	Complies
Maximum Hard Surface Coverage (Percent)	75	0.05	Complies
Maximum Impervious Surface (percent)	10**	0.03	Complies
Minimum Greenspace (percent)	50	98	Complies

** If a site in a nonresidential shoreline environment is developed with a single-family dwelling, the allowed maximum lot coverage shall not exceed the maximum lot coverage by structure established for the underlying land use district.*

*** Maximum impervious surface allowed per LUC 20.25E.050 within the Urban Conservancy – Open Space shoreline environment.*

B. Consistency with the Shoreline Standards

i. Shoreline Uses – 20.25E.030

Single-family residences are an allowed use within the Urban Conservancy – Open Space (UC-OS) shoreline environment when there is no other feasible alternative. The proposal limits the development within the shoreline environment to a portion of the driveway used to access the single-family home. Single-family residences include *"structures and developments within a contiguous ownership which are a normal appurtenance"* and the SMP notes driveways as an appurtenance of a single-family residence. See Table 1 for Shoreline Environments Use Chart and applicable footnotes.

Table 1 – 20.25E.030

	SHORELINE ENVIRONMENTS					
LAND USE CLASSIFICATION	Aquatic	Urban Conservancy – Open Space	Urban Conservancy	Shoreline Residential	Shoreline Residential Canal	Recreational Boating
Single-Family Dwelling	X	SSDP (1)	SSDP (1)	SSDP	SSDP	SSDP (2)

(1) Single-family dwellings are allowed in this shoreline environment only if there is no other feasible alternative, pursuant to the requirements of LUC 20.25E.060.C (Technical Feasibility Analysis), to locate the building on the portion of the property outside the Shoreline Overlay District.

SSDP - Permitted use subject to Shoreline Substantial Development Permit or exemption requirements (see LUC 20.25E.160 and 20.25E.170)

ii. No Net Loss of Ecological Function – 20.25E.060.B

As part of the Variance to the SMP request, the applicant has provided a written analysis by Aquatica Environmental Consulting, a qualified professional, of the existing functions and values of the category III wetland that would be impacted by the construction of the driveway. Per LUC 20.25E.060.G, wetlands located within the Shoreline Overlay District are regulated by the provisions of 20.25H, and as part of the proposed modifications the applicant has provided a single report addressing no net loss of ecological function, required by the SMP, and net improvement of wetland functions and values, required by the Critical Areas Ordinance. Additional analysis of wetland functions and values is provided in Section III.C and VIII of this report.

iii. Technical Feasibility Analysis – 20.25E.060.C

As noted above, single-family residences and development proposed to be located within the UC-OS shoreline environment require a feasibility analysis, and the applicant has provided an analysis authored by Aquatica Environmental Consulting with this application. The report provided information to following analysis criteria:

1. **Existing site conditions, including, but not limited to, topography and the proposed location of the facility, system, technique, or measure in relation to the ordinary high water mark and any critical areas on the site;**
   The site contains a category III wetland located on the east side of the site near the eastern property line and 128th Ave SE. Access to the site is at 128th Ave SE. The site also contains a category I wetland along the south property line, and buffers from the wetlands, an off-site stream (Kelsey Creek), and 100-year floodplain. A steep slope and its buffer is present along the western portion of the site. An area located outside of the listed critical area, buffers, and their structure setbacks is located in the central portion of the site along the north property line.

2. **The location of existing infrastructure necessary to support the proposed facility, system, technique, or measure;**
   As noted above, access to the site occurs at 128th Ave SE via a gravel road. Utilities are available from 128th Ave SE.

3. **The function or objective of the proposed facility, system, technique, or measure;**
   The project proposes to construct a driveway within the north side of the category III wetland to provide access from the 128th Ave SE and the single-family home. The proposed home has been located within the area not encumbered by the critical areas or their buffers. The site was comprised of three legal lots which would have each been entitled to have a house constructed. This proposal combines the three lots into one and proposes one house which minimizes the impacts proposed and only locates the proposed driveway in the wetland that is within shoreline jurisdiction.

4. **The level of risk to a primary structure, public facility, or public use structure or area presented by shoreline erosion, and the ability of the proposed facility, system, technique, or measure to mitigate that risk;**
   No risk to the primary structure or the driveway is anticipated since the limit of the shoreline area is contained within the category III wetland and not in an area expected to have typical shoreline erosion. The design of the driveway will be further evaluated under the Building Permit to verify its constructability, including Clearing & Grading and Utilities department review of the final design. See Section X for conditions of approval related to the required Building Permit.

5. **Whether the cost of avoiding the disturbance of the shoreline area is disproportionate as compared to the environmental impact of proposed disturbance, including any continued impacts on functions and values over time; and**
   Avoidance of the wetland within shoreline jurisdiction is not possible. The SMP prioritizes single-family and residential use of the shoreline. Development of a single-family home at this site cannot avoid impacting the category III wetland due to the location of ingress and egress to the City right of way. Strict adherence would render this residentially zoned site undevelopable for the intended use.

6. **The ability of both permanent and temporary construction disturbance to be mitigated.**
   A mitigation and enhancement plan has been prepared by Aquatica Environmental Consulting which has identified approximately 927 square feet of impacts to the category III wetland. The enhancement plan proposes a total of 25,153 square feet of wetland enhancement, including but not limited to use of native species such as Sitka spruce (*Picea sitchensis*), Pacific willow (*Salix lasiandra*), and Sitka willow (*Salix sitchensis*). In addition to native planting, the project will also install large woody material (LWM) throughout the remaining portion of the impacted wetland. See Section X for conditions of approval related to the required mitigation and enhancement plans.

iv. Mitigation Requirements and Sequencing – 20.25E.060.D

The applicant supplied a complete Critical Areas Report prepared by Aquatica Environmental Consulting, a qualified professional (Attachment 3). The report includes mitigation requirements and sequencing meeting the minimum requirements in LUC 20.25E.060.D.

v. Requirements Applicable to Development – 20.25E.060.E

All development proposals in the Shoreline Overlay District shall comply with the following requirements:

1. **Disruption of shoreline resources, including land disturbing activity such as clearing and grading and tree removal, shall be the minimum**

necessary to accommodate the permitted use or development.

Finding: The proposal results in the minimum amount of disruption to the wetland/shoreline area while allowing access to the house from 128th Ave SE. Locating the house closer to 128th Ave SE would result in greater impacts to the wetland and/or the wetland buffer. By limiting the impacts to location and construction of the driveway, the total area of permanent impact to the wetland is less than 927 square feet and will be mitigated by approximately 25,153 square feet of wetland enhancement.

2. **New development should be located and designed to avoid the need for shoreline stabilization.**

   Finding: No shoreline stabilization is proposed as part of this project.

3. **All new development shall comply with applicable Bellevue policies, codes and requirements, including, but not limited to, Chapter 24.06 BCC (Storm and Surface Water Utility Code), the Storm and Surface Water Engineering Standards (January 2011), now or hereafter amended, Chapter 23.76 BCC (Clearing and Grading Code), and the Clearing and Grading Development Standards, now or as hereafter amended. Bellevue City Code provisions of general applicability are not part of the SMP unless specifically adopted by reference.**

   Finding: City staff have reviewed the proposal and determined the proposal can meet applicable City codes. Additional technical review information can be found in Section V of this report. City staff will verify conformance with the applicable codes and this conceptual plan at the time of Building Permit review. See Section X for conditions of approval related to the required Building Permit.

4. **Repair and Maintenance and/or Construction Staging.**

   a. **Work shall be consistent with all applicable City of Bellevue codes and standards; and**

      Finding: As noted above, City staff have determined the proposal to be consistent with applicable City codes. City staff will verify conformance with applicable City codes at the time of Building Permit review.

   b. **Areas of temporary construction disturbance associated with the work shall be restored to pre-project conditions, pursuant to a restoration plan meeting the requirements of subsection D of this section.**

      Finding: Any areas of temporary construction disturbance will be require to be restored in accordance with subsection D and any applicable sections

of LUC 20.25H regulating critical areas and their buffers.

5. **Project Segmentation – When Prohibited. A single project shall not be divided into segments or characterized as routine maintenance and repair or a minor expansion to avoid compliance with the procedural or substantive requirements of the SMP.**

   Finding: Segmentation of the project is not proposed.

vi. Critical Areas in the Shoreline Overlay District – 20.25E.060.G

Critical areas in the Shoreline Overlay District shall be regulated pursuant to Part 20.25H LUC, Critical Areas Overlay District (as set forth in Ordinance No. 6417, passed on May 21, 2018, which is incorporated by this reference into the SMP). In the event of a conflict between Part 20.25H LUC and the SMP, the provision providing the greatest protection to critical areas shall apply, consistent with LUC 20.25E.010.C.1.b.ii, unless otherwise described in the applicable provision. If critical areas are located on the site, the requirements for the associated critical area buffer and buffer setback may impose a larger setback requirement than required under this section.

Finding: The provisions of LUC 20.25H governing wetlands, with the exception of shoreline lake-fringe wetlands, provide greater protections to the on-site wetlands in that specific performance standards must be met, mitigation sequencings must be applied, and the resulting development must result in an improvement of wetland and wetland buffer functions and values. Application of Shoreline provisions would only require justification of allowed use and determination the proposal results in no net loss of ecological function. Modification of wetlands and wetland buffers is allowed through the provisions of LUC 20.25H through a Critical Areas Report (CAR), however no clear procedural path is noted within the SMP for use of a CAR and the Department of Ecology has advised the use of a Variance to SMP as pathway to use a CAR for modifications under LUC 20.25H.

vii. Parking and Driveways – 20.25E.065.B.2.b

New driveways and garages associated with residential development shall comply with the following applicable standards:

1. **New residential parking shall not be permitted over water or within the shoreline structure setback.**
   No parking is proposed over water or within the shoreline structure setback.

2. **New parking surfaces and driveway areas should be designed to incorporate natural drainage practices and low-impact development practices where feasible. (For further information regarding Citywide requirements, refer to the Storm and Surface Water Utility Code, Chapter 24.06 BCC, and the Storm and Surface Water Engineering Standards**

(2011), now or as hereafter amended.)
The driveway is proposed to be constructed with a permeable surface engineered to comply with Utilities Code and Land Use Code standards. Review of the final design will occur under the Building Permit to determine compliance with all applicable City codes. See Section X for conditions of approval related to the required Building Permit and permeable driveway construction.

3. **Construction, maintenance, and repair of parking surfaces and driveways shall prevent surface water runoff from contaminating water bodies by using best management practices. (For further information regarding Citywide requirements, refer to the Bellevue Storm and Surface Water Utility Code, Chapter 24.06 BCC, and the Storm and Surface Water Engineering Design Standards (2011); now or as hereafter amended.)**
As noted above in number 2, the proposed driveway has been designed to be permeable to comply with Utilities Code and Land Use Code requirements, which include, but is not limited to, prohibiting discharge of untreated stormwater to a wetland or wetland buffer. Conformance with applicable City code standards will be reviewed under the Building Permit application. See Section X for conditions of approval related to the required Building Permit.

viii. Critical Areas – 20.25E.065.B.2.e
Critical areas in the Shoreline Overlay District shall be regulated pursuant to Part 20.25H LUC, Critical Areas Overlay District (as set forth in Ordinance No. 6417, passed on May 21, 2018, which is incorporated by this reference into the SMP). In the event of a conflict between Part 20.25H LUC and the SMP, the provision providing the greatest protection to critical areas shall apply, consistent with LUC 20.25E.010.C.1.b.ii, unless otherwise described in the applicable provision. If critical areas are located on the site, the requirements for the associated critical area buffer and buffer setback may impose a larger setback requirement than required under this section.

Finding: See Section 3.B.vi of this report.

C. Consistency with Land Use Code Critical Areas Performance Standards:

i. Uses and Development Allowed within Critical Areas Standards – LUC 20.25H.055.C.2
New driveways are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

1. **The location of existing infrastructure;**
Access to the site occurs at 128th Ave SE via a gravel road. The site has no other adjacency or access easement through the adjacent private properties

to the City right of way. Utilities are also available from 128th Ave SE.

2. **The function or objective of the proposed new or expanded facility or system;**
   The driveway will serve as access to the single-family home.

3. **Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;**
   The single-family home has been sited outside of on-site critical areas and buffers to the degree feasible. By only locating the driveway within the wetland impacts to the wetland are minimized to 972 square feet. No other alternative for access to the City right of way for ingress and egress is available except along the east side of the property. The category III wetland is located on-site and directly adjacent to the eastern property so no access can occur to the site without impacting the wetland or its buffer.

4. **Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and**
   Avoiding disturbance may be possible through the construction of a bridge but the cost of doing so would be disproportionate to the environmental impacts.

5. **The ability of both permanent and temporary disturbance to be mitigated.**
   A mitigation and enhancement plan has been prepared by Aquatica Environmental Consulting which has identified approximately 927 square feet of impacts to the category III wetland. The enhancement plan proposes a total of 25,153 square feet of wetland enhancement, including but not limited to use of native species such as Sitka spruce (Picea sitchensis), Pacific willow (Salix lasiandra), and Sitka willow (Salix sitchensis). In addition to native planting, the project will also install large woody material (LWM) throughout the remaining portion of the impacted wetland. See Section X for conditions of approval related to the required mitigation and enhancement plans.

ii. Stream and Wetland Performance Standards – LUC 20.25H.080 & 100

Development on sites with a stream, wetland, stream critical area buffer, or wetland critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. **Lights shall be directed away from the stream and wetland.**
   No lighting is proposed to be directed at the stream, wetlands, or their respective buffers. Conformance with this requirement will be determined at the time of Building Permit application. See Section X for conditions of approval related to exterior lighting.

2. **Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the stream and wetland, or any noise shall be minimized through use of design and insulation techniques.**
   The single-family home is proposed to be located approximately 120 feet from the top of bank of Kelsey Creek; 130 feet from the edge of the category I wetland; and 125 feet from the category III wetland.

3. **Toxic runoff from new impervious area shall be routed away from the stream and wetlands.**
   No toxic runoff is proposed to be discharged to the stream or wetlands.

4. **Treated water may be allowed to enter the stream and wetland critical area buffers.**
   Treated water is proposed to be discharged to the wetland to maintain historical flow towards the natural flow path and to continue to provide natural stormwater input to the wetlands.

5. **The outer edge of the stream and wetland critical area buffers shall be planted with dense vegetation to limit pet or human use.**
   A mitigation and enhancement plan containing approximately 67,723 square feet of mitigation and enhancement planting will be installed throughout the buffer and included in the outer limits. The proposed densities will equal or exceed those published in the Critical Areas Handbook. Conformance with this standard will be reviewed at the time of the Building Permit application. See Section X for conditions of approval related to the required mitigation and enhancement plan.

6. **Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.**
   No use of pesticides, insecticides, or fertilizers is proposed. Any use of these substances will be required to comply with Environmental Best Management Practices. Conformance with this standard will be further reviewed at the time of the Building Permit. See Section X for conditions of approval related to the use of pesticides, insecticides, and fertilizers.

7. **All applicable standards of Chapter 24.06 BCC, Storm and Surface Water Utility Code, are met. (Ord. 6417, 5-21-18, § 34; Ord. 5680, 6-26-06, § 3)**
   Utilities Department staff have reviewed the proposal and have found the proposal generally acceptable. Additional technical review details can be found in Section V of this report.

D. Consistency with Critical Areas Report LUC 20.25.230.

The applicant supplied a complete critical areas report (Attachment 3) prepared by

Aquatica Environmental Consulting, a qualified professional. The report met the minimum requirements in LUC 20.25H.250.

IV. Public Notice and Comment

Application Date:	October 22, 2021 (LO), January 21, 2022 (LS & WG)
Public Notice (500 feet):	December 9, 2021 (LO), March 17, 2022 (LS & WG)
Minimum Comment Period:	December 23, 2021 (LO), April 18, 2022 (LS & WG)

The Notice of Application for the Critical Areas Land Use Permit was published in the City of Bellevue weekly permit bulletin on December 9, 2021. It was mailed to property owners within 500 feet of the project site. The Notice of Application for the Shoreline Substantial Development Permit and the Variance to the Shoreline Master Program was published in the City of Bellevue weekly permit bulletin on March 17, 2022. It was mailed to property owners within 500 feet of the project site. Two comments have been received from the public as of the writing of this staff report.

Summary of Comments:

Comment: *I am concerned about the damaging impacts this project will have on wetlands adjacent to Kelsey Creek Park*.

Response: The project will result in approximately 972 square feet of direct impact to the category III wetland and approximately 2,489 square feet of impacts to its wetland buffer in order to construct a driveway. The three (3) original parcels of the site were consolidated into one (1) one residential parcel and the project has been designed to avoid wetland impacts by limiting the impacts to a driveway and not constructing the house within the wetland or wetland buffer. Additionally, sanitary sewer, water, and electric power that originates at 128th Ave SE are proposed to be located within the driveway further minimizing impacts to the wetland and wetland buffer.

To mitigate the impacts and to improve the overall functions and values of the wetland and wetland buffer, the project includes a mitigation and enhancement plan that directly addresses degraded conditions of the wetland and wetland buffer, including but not limited to wetland and wetland buffer planting, invasive species removal, and installation of large wood material (LMW). The mitigation and enhancement area will be approximately 67,723 square feet, which results in a ratio of 19.6:1 mitigation and enhancement (SF) to impacts (SF).

In addition to planting and enhancement, the project will be required to conduct routine maintenance and abide by an annual maintenance and monitoring program for a period of five years to ensure the establishment and success of the mitigation and enhancement area.

While temporal loss of wetland and buffer functions and values may be lost or decreased in the near term, the overall mitigation and enhancement plan is expected to improve wetland

and wetland buffer functions and values in the long-term.

Comment: *I do not understand how the City can allow someone to build on a wetland.*

Response: As discussed in Section III of this report development of a driveway within a wetland and wetland buffer in shoreline jurisdiction can be allowed through an approved Critical Areas Land Use Permit, Shoreline Substantial Development Permit, and Variance to the SMP, applications of which the applicant has submitted for review. A single-family residence and associated development are an allowed use on sites with critical areas and shorelines and in this case the proposal must be the most technically feasible alternative with the least impact. The proposal to build one house on a site that could possibly allow three homes, locating the house to avoid as much of the buffers and critical areas as possible, and limiting impact to necessary access driveway minimize impacts to the maximum extent possible.

V. Summary of Technical Reviews

Clearing and Grading:
The Clearing and Grading Division of the Development Services Department has reviewed the proposed development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development. Conformance with the conceptual plans submitted in this application will be reviewed under the Building Permit. Work within proximity to the wetland will be restricted during the rainy season unless specifically allowed by Clearing & Grading approval through implementation of specific BMPs. See Section X for conditions of approval related to the Building Permit, Clearing & Grading BMPs, and rainy season restrictions.

Utilities:
City of Bellevue Utilities Department staff has reviewed the proposed development for compliance with City of Bellevue Utilities codes and standards. Utilities staff found no issues with the proposed development.

Transportation:
City of Bellevue Transportation Department staff has reviewed the proposed development for compliance with City of Bellevue Transportation and Right of Way codes and standards. Transportation staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

Per BCC 22.02.032 and WAC 197-11-800(1) construction and associated grading of one single-family residence and improvements located in critical areas is exempt from SEPA review.

VII. Changes to Proposal as a Result of City Review

No significant changes were requested by City staff during the review of this proposal.

VIII. Decision Criteria

A. Technical Feasibility Analysis – LUC 20.25E.060.C.2

Where an applicant demonstrates that no technically feasible alternative exists to provide the function or objective of the proposed facility, system, technique, or measure with less impact on the shoreline setback, then the applicant shall comply with the following design criteria:

1. Design shall result in the least impacts to shoreline functions and values;

Finding: The proposal has been designed to have the least impact on the shoreline (category III wetland) while also allowing for single-family development of the property to occur. By locating the home outside of the wetland buffer, the impact to the shoreline is limited to 927 square feet of fill to construct a driveway that connects the home to the City right of way.

2. Disturbance, including the disturbance of vegetation and soils, shall be minimized;

Finding: The project design has minimized impacts to the wetland subject to shoreline jurisdiction by limiting to the driveway width to the narrowest allowed by City code, designing the driveway as a pervious surface to treat and infiltrate stormwater, and consolidating utilities needed for the home into the driveway. This results in the least amount of disturbance and impacts to vegetation and soil within the shoreline.

3. Disturbance shall not occur in habitat used for salmonids rearing or spawning or by any species of local importance unless no other technically feasible location exists;

Finding: No development is proposed in habitat used by salmonids or any other species of local importance.

4. All work shall be consistent with the SMP and with applicable City of Bellevue codes and standards; and

Finding: This proposal has been reviewed by City Staff from Land Use, Clearing & Grading, Utilities, and Transportation departments. Review staff found no issues with this proposal and the conceptual plans contained. Further review of the project will be conducted under the Building Permit to verify conformance with this requirement and with the submitted conceptual plans in this application.

5. Areas of new permanent disturbance and all areas of temporary construction disturbance shall be mitigated or restored pursuant to a mitigation restoration plan meeting the requirements of subsection D of this section and evaluated consistent with the no net loss standard in subsection B of this section.

Finding: All areas of temporary and permanent disturbance are proposed to be mitigated, enhanced, or restored. The proposal results in no net loss to shoreline ecological function and is expected to result in improved functions and values over what currently exist.

B. Shoreline Substantial Development Permit – LUC 20.25E.160

The Director may approve or approve with modifications a Shoreline Substantial Development Permit if:

1. The proposal is consistent with the policies and procedures of the Shoreline Management Act;

Finding: As evaluated the proposal is consistent with applicable policies and procedures of the Shoreline Management Act (SMA). The SMA includes broad policies that give priority to water-dependent uses and activities and single-family residences are specifically identified as a preferred use.

2. The proposal is consistent with the provisions of Chapter 173-27 WAC;

Finding: The applicant's proposal is consistent with the general policies and has demonstrated compliance with the applicable procedures and requirements of the WAC through this permit application.

3. The proposal is consistent with the SMP;

Finding: As evaluated in Section III of this report, the applicant has submitted project plans that demonstrate the proposal's consistency with the policies and procedures of the Shoreline Management Program (SMP) including, but not limited, those policies and procedures related to allowed uses and no net loss of ecological function.

4. The proposal will be served by adequate public facilities including streets, fire protection, and utilities;

Finding: The site will be served by adequate public facilities upon development. Utilities and access to the site will occur from 128th Ave SE.

5. The proposal is consistent with the Bellevue Comprehensive Plan; and

Finding: The applicant's proposal is consistent with the following policies and has demonstrated compliance with the SMP through this application. Specifically:

SH-1 - Allow compatible water-dependent uses and development when associated with permitted upland uses and in accordance with applicable policies and regulations.

SH-9 - Recognize residential development, appurtenant structures, and water-

dependent and water-enjoyment recreation activities as preferred where they are appropriate and can be developed without significant impact to ecological functions identified in the Shoreline Analysis Report or displacement of water-dependent uses.

SH-18 - Give preference to residential and water dependent, water-enjoyment, and water-related uses (in that order) when the use, activity, or development preserves shoreline ecological functions and processes or, where necessary, mitigates impacts to water quality, fish and wildlife habitat, and other shoreline functions.

EN-62 - Preserve and maintain the 100-year floodplain in a natural and undeveloped state, and restore conditions that have become degraded.

EN-63 - Preserve and maintain fish and wildlife habitat conservation areas and wetlands in a natural state and restore similar areas that have become degraded.

EN-69 - Preserve and enhance native vegetation in Critical Area buffers and integrate suitable native plants in urban landscape development.

S-RV-5 - Retain the remaining wetlands within the 100-year floodplain along Richards Creek, Kelsey Creek, and Mercer Slough for drainage retention and natural resource park use.

S-RV-6 - Protect and enhance the capability of Richards Creek, Kelsey Creek, and Mercer Slough and their tributaries to support fisheries along with other water-related wildlife.

S-RV-7 - Retain and enhance existing vegetation on steep slopes, within wetland areas, and along stream corridors to control erosion and landslide hazard potential and to protect the natural drainage system.

The proposed single-family home and appurtenances are consistent with this goal to allow residential use of the shoreline and will not have an adverse effect on water quality, vegetation, fish, and wildlife in or near the water.

6. The proposal complies with applicable requirements of the Bellevue City Code.

Finding: As reviewed in Section III and V of this report, the proposal complies with all applicable requirements of the Bellevue City Code. Final determination of compliance with Bellevue City Code will occur during review of the required Building Permit. <u>See Section X for conditions of approval related to Building Permit requirements</u>.

C. Variance to the Shoreline Master Program – LUC 20.25E.190

The City may approve or approve with modifications an application for a shoreline variance to the SMP if:

1. Denial of the variance would result in thwarting the policy of RCW 90.58.020;

Finding: RCW 90.58.020 notes, "Alterations *of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures…*" The proposal requests alteration of the existing site conditions for the purpose of constructing a driveway, an appurtenance to the proposed single-family home, within the wetland and wetland buffer. Denial would be contrary to the priority noted in RCW 90.58.020.

2. The applicant has demonstrated extraordinary circumstances and the public interest will suffer no substantial detrimental effect;

Finding: The applicant has demonstrated an extraordinary circumstance exists based on the landlocked residential parcels they own with no access to the City right of way, except for the proposed driveway connection. These parcels are further limited by the presence of a category III wetland directly adjacent to the City right of way. Wetland and wetland buffer conditions have been documented as being degraded due to non-native and invasive species coverage. The proposal seeks to mitigate impacts from the driveway development by removing non-native invasive species from the wetland and wetland buffer, planting a diverse array of native wetland vegetation, and installing large woody material (LWM) throughout the wetland and wetland buffer. Improved shoreline conditions are expected as a result of the proposed mitigation and enhancement. This variance would allow impact to a wetland which is allowed under the City's critical area regulations but will not have a substantial detrimental effect on the public interest.

3. The strict application of the bulk, dimensional or performance standards of the SMP precludes, or significantly interferes with, reasonable use of the property;

Finding: Strict application of the bulk, dimensional, or performance standards of the SMP would result in the site being undevelopable. The site has no options to gain access to the City right of way except at 128th Ave SE. Granting of an access easement through one of the adjoining residential parcel would likely make the grantor's lot non-conforming to zoning requirements due to existing development conditions. Not allowing the wetland to be impacted to facilitate access onto the site would preclude development of the site.

4. The hardship described in subsection D.1.c of this section is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size or natural features and the application of the SMP, and not, for example, deed restrictions or the applicant's own actions;

Finding: The hardship is due to the presence and location of the category III wetland and the unique nature of the environmental constraints on the site as it is surrounded by overlapping wetlands, stream, floodplain, and shoreline features associated with Lower

Kelsey Creek. Due to these environmental features and the location of access to the City right of way, there is a hardship created on the property and potential development. The applicant has consolidated three (3) parcels that were all constrained by these conditions in an effort to facilitate the establishment of one house on this site that is located in the location with least possible impact. However, even this consolidation does not result in complete avoidance of impacts to the wetland which is necessary to provide access to the site.

5. The design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Bellevue Comprehensive Plan and SMP and will not cause adverse impacts to the shoreline environment;

Finding: The proposal is to construct a single-family home and single-family appurtenances, and the parcels directly adjacent to this site are developed with single-family homes and single-family appurtenances. The site is zoned R-4 (single-family residential) with a Comprehensive Plan designation of SF-H (single-family high density), and the proposal is anticipated by the zoning and Comprehensive Plan designation.

6. The variance does not constitute a grant of special privilege not enjoyed by the other properties in the area, and is the minimum necessary to afford relief; and

Finding: The variance will allow the site to be developed with a single-family home which it cannot achieve without an approved variance to the SMP. The surrounding development to the north and the east is largely made up of single-family homes with direct access to the City right of way. The variance request to allow permanent modification of a wetland to construct a driveway is specific to providing access to and from the home to the right of way, a right currently enjoyed by the single-family developments in the near vicinity. The proposed driveway is the minimum necessary to provide access to the proposed house across the wetland.

7. If the variance permits development and/or uses that will be located either waterward of the ordinary high water mark as defined in RCW 90.58.030(2)(c), or within any wetland as defined in RCW 90.58.030(2)(h), it may be authorized provided the applicant can demonstrate compliance with the following additional criteria that:

a. The strict application of the bulk, dimensional or performance standards of the SMP precludes all reasonable use of the property, and

Finding: Strict application of the bulk, dimensional, or performance standards would not allow for reasonable development of the site due to the proximity of the category III wetland to the City right of way. With no other alternatives for access available to this site, prohibition of development through the wetland would render this site undevelopable while also being zoned for single-family residential development.

b. The public rights of navigation and use of the shorelines will not be adversely affected by the granting of the variance.

Finding: No impacts to public rights of navigation or use are proposed. The impacts are limited to an upland wetland associated with Lower Kelsey Creek on private residential property.

D. Technical Feasibility Decision Criteria – LUC 20.25H.055.C.2.b

If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

1. Location and design shall result in the least impacts on the critical area or critical area buffer;

Finding: The proposal has been designed to have the least impact on the wetland and wetland buffer while also allowing for construction of a driveway connecting the proposed single-family home to 128th Ave SE. By locating the home outside of the wetland buffer, the impact to the wetland is limited to 927 square feet of fill to construct a driveway that connects the home to the City right of way.

2. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

Finding: The project design has minimized impacts to the wetland by limiting to the driveway width to the narrowest allowed by City code, designing the driveway as a pervious surface to treat and infiltrate stormwater, and consolidating utilities needed for the home into the driveway. This results in the least amount of disturbance and impacts to vegetation and soil within the category III wetland and wetland buffer.

3. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

Finding: No development is proposed in habitat used by salmonids or any other species of local importance.

4. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the

critical area or critical area buffer;

Finding: The design of the driveway through the wetland is the narrowest design possible while also meeting other City Code requirements and is located as close to 128th Ave SE as possible to minimize wetland buffer disturbance. In addition to driveway location and size, utilities for the site will be located within the driveway to further avoid impacts outside of the driveway footprint.

5. All work shall be consistent with applicable City of Bellevue codes and standards;

Finding: As discussed in Section III and V of this report, the proposal complies with all other applicable codes and standards.

6. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

Finding: No change in aquatic flow, duration, volume, flood storage capacity, or hydroperiod is expected.

7. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

Finding: Impacts to the category III wetland and wetland buffer are limited to impacts associated with driveway. No other impacts within the wetlands or wetland buffers are proposed to occur.

8. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

Finding: A mitigation and enhancement plan meeting the requirements of LUC 20.25H.210 has been submitted with this application. The plans include approximately 67,723 square feet of mitigation and enhancement to the category III wetland, wetland buffers, and stream buffers. Any temporary disturbance will be required to be restored to preconstruction or better conditions. In addition to mitigation and enhancement, the project will also be required to create a native growth protection easement over the remaining critical areas and buffers of the site outside of the permanent single-family improvements. See Section X for conditions of approval related to the required mitigation, enhancement, and native growth protection easement.

E. Critical Areas Report Decision Criteria-Proposals to Reduce Regulated Critical

Area Buffer LUC 20.25H.255.
The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as the application of the regulations and standards of this code;

Finding: The modifications and performance standards included in this proposal will lead to improved levels of protection of critical areas functions and values. The CAR (Attachment 3) identifies and documents the degraded conditions on-site, both in the area of where the proposed single-family residence is and where the proposed mitigation and enhancement planting will occur. With the installation of native vegetation, net improvement is expected, primarily through the improvements to the existing habitat conditions and stormwater quality. See Section X for conditions of approval related to the mitigation and enhancement plan.

2. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;

Finding: A five-year maintenance and monitoring plan has been included in the proposal. In addition to maintenance and monitoring activities, an assurance device associated with the maintenance and monitoring will be required as part of the Building Permit. See Section X for conditions of approval related to the financial assurance device.

3. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

Finding: The modifications and performance standards included in the proposal are not detrimental to off-site critical areas and buffers and are expected to lead to improved function for on-site and off-site stream and wetland critical areas and their buffers. As noted in the Critical Areas Report the areas of low level of function on this site would continue without the modification to the wetland, wetland buffer, stream buffer, and the implementation of the mitigation and enhancement plan. The wetland, wetland buffer, and stream buffer functions will be improved with the proposed actions.

4. The resulting development is compatible with other uses and development in the same land use district. (Ord. 5680**, 6-26-06, § 3)**

Finding: The proposal does not change the underlying zoning or existing land use. The parcels adjacent to the site to the north are developed with single-family homes and appurtenances. No change in compatibility with the other single-family uses and developments in the local vicinity of the project is expected.

F. Critical Areas Land Use Permit Decision Criteria 20.30P

The Director may approve or approve with modifications an application for a critical areas land use permit if:

1. The proposal obtains all other permits required by the Land Use Code;

Finding: The applicant will be required to apply for a Building Permit after the approval of the Critical Areas Land Use Permit. See Section X for conditions of approval related to the Building Permit.

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Finding: The proposal has been designed and located to minimize impacts to and improve wetland critical area, wetland buffer, and stream buffer functions. The proposed single-family residence is located within an area mostly outside of buffers with the exception of the driveway and small, 75 square-foot patio intrusion on the west side of the proposed house. Locating the development as proposed has the least impact on the overall critical area and buffer functions and values of the site. The proposal utilizes areas not regulated by the Critical Areas Ordinance and areas of existing disturbance to help avoid unnecessary development impacts to the on-site critical areas and their buffers. Additionally, on-site mitigation and enhancement of the category III wetland, wetland buffers, and stream buffers through plantings and vegetation enhancement will help to provide uplift in function both to the critical areas and buffers on the site. See Section X for conditions of approval related to the mitigation and enhancement plan.

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

Finding: As discussed in Section III of this report, the proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

Finding: The site will be served by adequate public facilities upon development. Utilities and access to the site will occur from 128th Ave SE.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: The proposal includes a mitigation plan that provides native planting consistent with LUC 20.25H.210. The plan also contains a five-year maintenance and monitoring plan to ensure successful establishment of installed planting. See Section X

for conditions of approval related to the mitigation and enhancement plans, maintenance and monitoring, and the financial assurance device.

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section III and V of this report, the proposal complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of the Development Services Department does hereby **approve with conditions** the proposal to:

- Construct a driveway with connection 128th Ave SE to the proposed single-family home as shown on the site plan (Attachment 1) that impacts a Category III wetland and wetland buffer.
- Modify a stream buffer, stream buffer structure setback, and wetland buffer structure setback to construct a new single-family residence at 807 128th Ave SE as shown on the proposed plans (Attachment 1).

Revision to Shoreline Substantial Development Permit approval shall be in accordance with LUC 20.25E.150.E.2.

Note - Expiration of Approval: In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Building Permit, Clearing and Grading Permit, or other necessary development permits within one year of the effective date of the approval.

Note - Expiration of Approval: In accordance with LUC 20.25E.250.C.2, a Shoreline Substantial Development Permit automatically expires and is void if the applicant fails to file for a Clearing & Grading Permit and fails to make substantial progress towards completion of the project within two (2) years of the effective date of the Shoreline Substantial Development Permit unless the applicant has received an extension for the Shoreline Substantial Development Permit pursuant to LUC 20.25E.250.C.6.

Permit authorization expires finally, despite commencement of construction, five years after the effective date of the Shoreline Substantial Development Permit unless the applicant has received an extension pursuant to LUC 20.25E.250.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

Applicable Ordinances	Contact Person
Clearing and Grading Code- BCC 23.76	Savina Uzunow, 425-452-7860
Utilities Code- BCC 24	Jeremy Rosenlund, 425-452-7683
Land Use Code- BCC 20.25H	David Wong, 425-452-4282
Transportation Code- BCC 14	Ian Nisbet, 425-452-4851

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Building Permit Required: Approval of this Critical Areas Land Use Permit does not constitute an approval of a development permit. A Building Permit shall be required and approved. Plans consistent with those submitted as part of this permit application shall be included in the Building Permit application.

Authority: Land Use Code 20.30P.140
Clearing & Grading Code 23.76.035

Reviewer: David Wong, Land Use
Savina Uzunow, Clearing & Grading

2. Land Use Inspection: A Land Use 600 inspection is required to be conducted and approved by Land Use or Clearing & Grading inspection staff prior to Final inspection by Building Permit inspection staff.

Authority: Land Use Code 20.30P.140
Reviewer: David Wong, Land Use

3. Hold Harmless Agreement: Prior to building permit approval, the applicant or property owner shall submit a hold harmless agreement releasing the City of Bellevue from any and all liability associated with the steep slope, steep slope buffer, and steep slope structure setback modifications. The agreement must meet city requirements and must be reviewed by the City Attorney's Office for formal approval.

Authority: Land Use Code 20.30P.170
Reviewer: David Wong, Land Use

4. Tree Protection: The Building Permit plan submittal shall include the tree protection measures to protect existing, retained trees during construction activity. Protection shall be consistent with Arborist Report recommendations and Clearing and Grading Department T101 Best Management Practices.

Authority: Land Use Code 20.25H.220
Reviewer: David Wong, Land Use

5. Mitigation and Enhancement Plan: A final mitigation plan is required to be submitted and approved with the Building Permit. The final mitigation plan shall be consistent with the approved conceptual mitigation plan (Attachment 2). The final mitigation plan shall show general planting locations, species, quantities and size of plant material. The mitigation planting shall meet plant density standards in the planting templates in the City's Critical Areas Handbook and the outer limits of the stream and wetland buffers shall be planted densely to discourage human and pet use.

Authority: Land Use Code 20.25H.125
Reviewer: David Wong, Land Use

5. Final Mitigation and Enhancement Plan Performance Standards: The final mitigation plan shall include performance standards to measure the successful establishment of the mitigation plantings. The following performance standards, as specified in the Critical Areas Report, are acceptable and shall be included on the final mitigation plans:

Year 1:
- 100% survival of all installed plants
- Less than 10% coverage of invasive plants in the mitigation areas

Year 2:
- 90% survival of all installed plants
- Less than 10% coverage of invasive plants in the mitigation areas

Year 3:
- 85% survival of all installed plants
- Less than 10% coverage of invasive plants in the mitigation areas
- Demonstrate a net reduction of reed canarygrass coverage from post-construction conditions

Year 4:
- 85% survival of all installed plants
- Less than 10% coverage of invasive plants in the mitigation areas
- Demonstrate a net reduction in reed canarygrass coverage from Year 3 conditions

Year 5:
- 85% survival of all installed plants
- 70% or greater coverage by native trees and shrubs in areas where no existing woody canopy coverage exists.
- 80% or greater native scrub shrub coverage within the wetland enhancement area
- Less than 10% coverage of invasive plants in the mitigation areas
- Demonstrate a net reduction in reed canarygrass coverage from Year 4 conditions

Authority: Land Use Code 20.25H.220
Reviewer: David Wong, Land Use

6. Maintenance & Monitoring Reporting: The mitigation planting is required to be maintained and monitored for five years to ensure the plants successfully establish. Annual monitoring reports are required to be submitted to document the plants are meeting approved performance standards. Photos from selected photo points shall be included in the monitoring reports to document the planting. Land Use inspection is required by Land Use staff to end the plant monitoring period.

Reporting shall be submitted no later than December 1st of each monitoring year and shall include a site plan and photos from photo points established at the time of Land Use inspection. Reports shall be submitted to David Wong or Reilly Pittman by the above listed date and can be emailed to dwong@bellevuewa.gov or mailed directly to:

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

Authority: Land Use Code 20.25H.220, 20.30P.140
Reviewer: David Wong, Land Use

7. Maintenance and Monitoring Assurance Device: A maintenance and monitoring surety is required prior to issuance of a Building Permit for an amount equal to 20% of the estimated cost of planting (plant materials, installation materials, and labor) and documentation of a 3rd party maintenance contract for five years. A cost estimate outlining the above costs is required to be submitted with the Building Permit. Financial surety is required to be posted prior to Land Use approval of the Building Permit. Release of the monitoring/maintenance surety after the 5-year monitoring period is contingent upon demonstration of performance standard compliance, on-time submission of annual reporting, and a final inspection of the planting area at the end of the 5-year period by Land Use staff. Failure to meet these requirements may result in the extension of the maintenance and monitoring period.

Authority: Land Use Code 20.25E.160, 20.25H.220
Reviewer: David Wong, Land Use

8. Pervious Surface Maintenance Agreement: A notarized and recorded pervious surface maintenance agreement is required to be submitted prior to Building Permit approval. The agreement shall provide exhibits for the pervious surface including, but

not limited, driveway plans and maintenance plans. Land Use staff will provide a completed template during the Building Permit review.

Authority: Land Use Code 20.25H.220.H
Reviewer: David Wong, Land Use

9. Pesticides, Insecticides, Herbicides, and Fertilizers: The use of pesticides, insecticides herbicides, and fertilizers to install and maintain the wetland buffer enhancement planting shall be in accordance with the City of Bellevue's "Environmental Best Management Practices." Herbicides, pesticides and insecticides used in the wetland buffer area shall be approved for aquatic use.

Authority: Land Use Code 20.25H.220.H
Reviewer: David Wong, Land Use

10. Lighting: All exterior lighting on the sides of the single-family development shall be directed away from the stream, wetland, and their buffers. Exterior lighting adjacent to the stream and wetland buffers shall be shielded and provide narrow illumination angles.

Authority: Land Use Code 20.25H.080 and 100.
Reviewer: David Wong, Land Use

11. Native Growth Protection Easement: The area outside of the single-family development area and encompassing the remaining critical areas and buffers shall be placed into a Native Growth Protection Easement (NGPE) and the easement recorded with King County. The recorded easement is required to be completed prior to land use inspection of the planting. The easement shall contain the following language:

NATIVE GROWTH PROTECTION EASEMENT (NGPE)
DEDICATION OF NATIVE GROWTH PROTECTION EASEMENT (NGPE) ESTABLISHES ON ALL PRESENT AND FUTURE OWNERS AND USERS OF THE LAND, AN OBLIGATION TO LEAVE UNDISTURBED ALL TREES AND OTHER VEGETATION WITHIN THE AREA, FOR THE PURPOSE OF PREVENTING HARM TO, PROPERTY AND ENVIRONMENT, INCLUDING BUT NOT LIMITED TO CONTROLLING SURFACE WATER RUNOFF AND EROSION, MAINTAINING SLOPE STABILITY, BUFFERING AND PROTECTING PLANTS AND ANIMAL HABITAT, EXCEPT, FOR THE REMOVAL OF DISEASED OR DYING VEGETATION WHICH PRESENTS A HAZARD OR IMPLEMENTATION OF AN ENHANCEMENT PLAN REQUIRED OR APPROVED BY THE CITY, ANY WORK, INCLUDING REMOVAL OF DEAD, DISEASED, OR DYING VEGETATION, IS SUBJECT TO PERMIT REQUIREMENTS OF THE CITY OF BELLEVUE CODES. THE OBLIGATION TO ENSURE THAT ALL TERMS OF THE NGPE ARE MET IS THE RESPONSIBILITY OF THE OWNERS OF THE LOT. THE CITY OF BELLEVUE SHALL HAVE THE RIGHT,

BUT NOT THE OBLIGATION, TO ENFORCE THE REQUIREMENTS, TERMS, AND CONDITIONS OF THIS RESTRICTION BY ANY METHOD AVAILABLE UNDER LAW.

Authority: Land Use Code 20.25H.030.A
Reviewer: David Wong, Land Use

12. NGPE Boundary Fence & Signage: Prior to approval of the Land Use inspection for the Building Permit, the applicant shall ensure installation of fencing and signage at the boundary of the Native Growth Protection Easement. Required signage will be provided by the City upon request. NGPE boundary fencing shall be of permanent construction and shall be of size and location to be visible and the boundary fence shall be a minimum of four (4) feet tall.

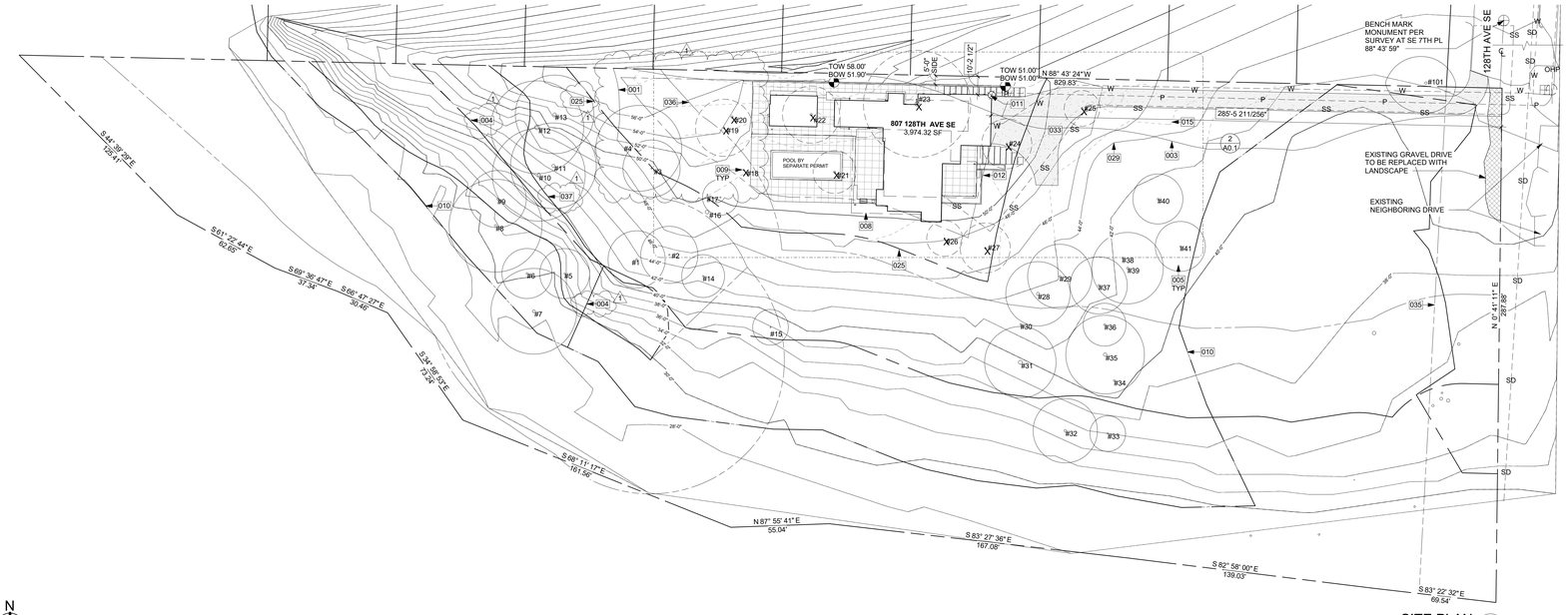
Authority: Land Use Code 20.25H.030.A
Reviewer: David Wong, Land Use

13. Clearing Limits and Temporary Erosion & Sedimentation Control: Prior to the initiation of any clearing or grading activities, clearing limits and the location of all temporary erosion and sedimentation control measures shall be field staked for approval by the on-site clearing and grading inspector.

Authority: Bellevue City Code 23.76.060 and 23.76.090
Reviewer: Savina Uzunow, Clearing and Grading

Rainy Season Restrictions: Due to the proximity of working occurring and the presence of a steep slope on-site, no clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Savina Uzunow, Clearing & Grading



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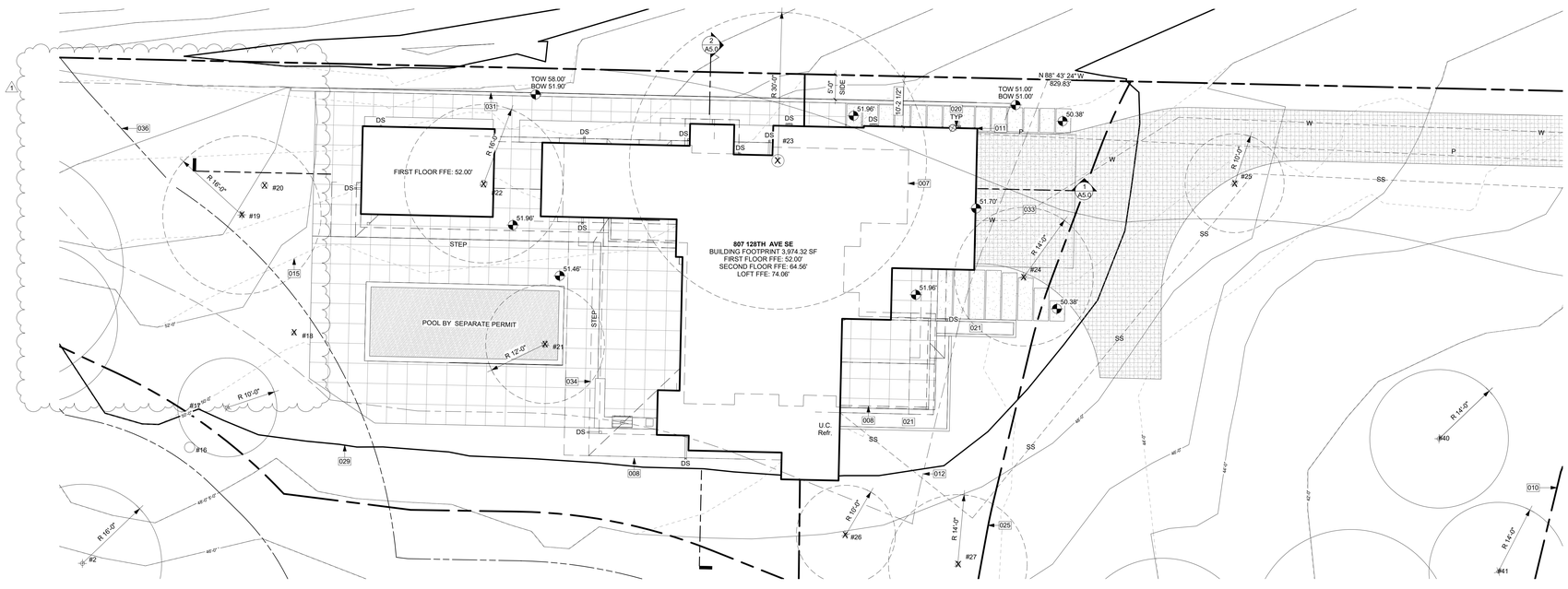
SITE PLAN 1
1" = 30'-0"



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ENLARGED SITE PLAN 2
1" = 10'-0"

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

KEY NOTES

001	STEEP SLOPE BUFFER OUTER LIMIT.
003	LINE OF KELSEY CREEK SHORLINE SETBACK.
004	LINE OF TOP OF BANK.
005	EXISTING TREE REMAIN.
007	DASHED LINE OF BUILDING ABOVE.
008	DASHED LINE OF ROOF ABOVE.
009	EXISTING TREES TO BE REMOVED.
010	WETLAND DELINEATION PER SURVEY.
011	PROJECT BASE POINT.
012	SETBACK LINE
015	DASHED LINE OF EXISTING GRADE.
020	DOWNSPOUT; TIGHTLINE TO STORMWATER SYSTEM PER CIVIL, TYP.
021	PLANTER BOX.
025	110' WETLAND BUFFER LIMIT.
029	LINE OF PROPOSED GRADE. PER CIVIL.
031	RETAINING WALL PER STRUCTURAL AND CIVIL.
033	DRIVEWAY PER CIVIL.
034	DASHED LINE OF ROOF ABOVE.
035	LINE OF VACATED/ABANDONED 128TH AVE SE RIGHT OF WAY.
036	LINE OF OUTER STREAM BUFFER LIMIT.
037	LINE OF TOP OF SLOPE.

TREE DENSITY CALCULATION

ONSITE TREES

TREE #	SPECIES	ACTION	CREDITS
#1	BIGLEAF MAPLE	RETAIN	11
#2	BITTER CHERRY	RETAIN	10
#3	BIGLEAF MAPLE	RETAIN	8
#4	OREGON ASH	RETAIN	38
#5	SCOULERS WILLOW	RETAIN	9
#6	BIGLEAF MAPLE	RETAIN	12
#7	BIGLEAF MAPLE	RETAIN	19
#8	SCOULERS WILLOW	RETAIN	15
#9	BIGLEAF MAPLE	RETAIN	12
#10	BIGLEAF MAPLE	RETAIN	20
#11	BIGLEAF MAPLE	RETAIN	21
#12	BIGLEAF MAPLE	RETAIN	32
#13	BIGLEAF MAPLE	RETAIN	21
#14	ENGLISH HAWTHORN	RETAIN	8
#15	CASCARA	RETAIN	8
#16	BITTER CHERRY	RETAIN	15
#17	BITTER CHERRY	RETAIN	9
#18	BITTER CHERRY	REMOVE	10
#19	BIGLEAF MAPLE	REMOVE	11
#20	BLACK COTTONWOOD	REMOVE	16
#21	BLACK COTTONWOOD	REMOVE	14
#22	SCOULERS WILLOW	REMOVE	16
#23	BIGLEAF MAPLE	REMOVE	30
#24	BITTER CHERRY	REMOVE	10
#25	COLORADO SPRUCE	REMOVE	12
#26	CASCARA	REMOVE	8
#27	BIGLEAF MAPLE	REMOVE	11
#28	BLACK COTTONWOOD	RETAIN	20
#29	SCOULERS WILLOW	RETAIN	12
#30	BLACK COTTONWOOD	RETAIN	11
#31	BLACK COTTONWOOD	RETAIN	27
#32	BLACK COTTONWOOD	RETAIN	17
#33	EUROPEAN WHITE BIRCH	RETAIN	9
#34	BLACK COTTONWOOD	RETAIN	11
#35	BLACK COTTONWOOD	RETAIN	23
#36	EUROPEAN WHITE BIRCH	RETAIN	12
#37	SCOULERS WILLOW	RETAIN	12
#38	SCOULERS WILLOW	RETAIN	19
#39	SCOULERS WILLOW	RETAIN	13
#40	ENGLISH HAWTHORN	RETAIN	10
#41	CASCARA	RETAIN	8

TOTAL DIAMETER **610**
TOTAL DIAMETER **RETAINED** **472**

OFFSITE TREES

TREE #	SPECIES	ACTION
#101	DOUGLAS FIR	RETAIN

LOT SIZE	173,655 SF / 3.99 ACRES
MIN RETAINED TREE DIAMETER	30%
TOTAL DIAMETER RETAINED	472
TOTAL DIAMETER REQUIRED	183
TOTAL MIN. DIAMETER REMEDIATION	77%

(SEE LANDSCAPE PLAN FOR ALL SUPPLEMENTAL TREES)

NOTES:
* SUPPLEMENTAL TREES TO MEET REQUIRED MINIMUM SIZE WORTH ONE TREE CREDIT AS OUTLINE IN KZC 95.33(4).
* 2" CALIPER FOR DECIDUOUS & 6-7 ft. TALL CONIFERS.

TREE PROTECTION GUIDELINES

ALL REMAINING TREES ARE TO HAVE A TREE PROTECTION ZONE (TPZ) ESTABLISHED BEFORE COMMENCEMENT OF ANY CONSTRUCTION OR DELIVERY ACTIVITIES. THE FOLLOWING GUIDELINES ARE TO BE OBSERVED AND PRACTICED DURING ALL CONSTRUCTION ACTIVITIES.

1. ACCESS IS TO BE RESTRICTED INTO TPZ'S WITH READILY VISIBLE TEMPORARY TREE FENCING ALONG THE LOD WHICH COMPLETELY SURROUNDS THE PROTECTED AREAS OF RETAINED TREES. FENCES SHALL BE CONSTRUCTED OF CHAIN LINK AND BE AT LEAST 4 FT TALL, CONSTRUCTED USING PIER BLOCK, AND MAJOR ROOTS SHOULD BE AVOIDED WHILE STAKING.
2. HIGHLY VISIBLE SIGNS SPACED NO FURTHER THAN 15 FEET SHALL BE PLACED ALONG SIDES OF THE TPZ FENCING.
3. CONSTRUCTION MATERIALS OR SUPPLIES, SOIL, DEBRIS, VEHICLES, AND EQUIPMENT ARE NOT TO BE PARKED OR STORED WITHIN TPZ.
4. TPZ FENCES MUST BE INSPECTED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITIES.
5. ASSESS CREW AND CONTRACTOR PENALTIES, IF NECESSARY, TO KEEP THE TPZ'S INTACT.
6. CHECK THE INTEGRITY OF TPZ FENCES WEEKLY, AND REPAIR OR REPLACE AS NEEDED.
7. WOOD CHIPS SHOULD BE USED IF POSSIBLE TO SPREAD ABOVE ROOT ZONES WITHIN THE TPZ'S TO A DEPTH OF 6-8 INCHES FOR TEMPORARY PROTECTION.
8. CEMENT TRUCKS MUST NOT DEPOSIT WASTE OR RINSE OUT TRUCKS IN THE TPZ.
9. AVOID GRADE CHANGES OR TRENCHING WITHIN OR NEAR THE TPZ. IF IT IS UNAVOIDABLE, THEN FOLLOW THE GUIDELINES BELOW.
10. TPZ'S MAY ONLY BE MOVED OR ACCESSED WITH PERMISSION FROM CITY OFFICIALS, AND ANY WORK DONE WITHIN TPZ'S MUST BE DONE WITH A CERTIFIED ARBORIST PRESENT.
11. IF ROOTS NEED TO PRUNED, THEY SHOULD BE CUT WITH PRUNING SAWS, MADE FLUSH WITH THE SIDE OF THE TRENCH.
12. TREES SHOULD BE WATERED TWICE A WEEK IF CONSTRUCTION IS TO TAKE PLACE DURING HOT SUMMER MONTHS

IF EXCAVATION OCCURS WITHIN THE DRIPLINES OF TREES SCHEDULED FOR RETENTION, THE FOLLOWING PROCEDURES MUST BE FOLLOWED TO PROTECT THEM:

1. THE CONTRACTOR SHALL VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES TO AVOID CONFLICTS AND MAINTAIN MINIMUM CLEARANCES; ADJUSTMENT SHALL BE MADE TO THE GRADE OF THE NEW UTILITY AS REQUIRED.
2. THE INNER ROOT ZONE SHALL NOT BE DISTURBED OR CUT (INNER ROOT ZONE = HALF THE DRIP LINE RADIUS).
3. ISA CERTIFIED ARBORIST MUST WORK WITH EQUIPMENT OPERATORS DURING TRENCHING/ EXCAVATION. THE ARBORIST SHOULD HAVE A SHOVEL, HAND PRUNERS, LOPPERS, HANDSAW, AND A SAWSALL.
4. IF ROOTS ONE INCH OR LARGER ARE DAMAGED BY EQUIPMENT, THE ARBORIST SHALL STOP THE EQUIPMENT AND HAVE THE DIRT EXCAVATED BY HAND UNTIL THE ROOT CAN BE CLEANLY CUT. A CLEAN STRAIGHT CUT SHALL BE MADE TO REMOVE THE DAMAGED PORTION OF ROOT, AND IF POSSIBLE THE ROOTS SHOULD BE COVERED IN MOIST BURLAP UNTIL RECOVERED WITH DIRT THE SAME DAY.
5. BORING OR TUNNELING UNDER ROOTS OF EXISTING TREES IS A VIABLE ALTERNATIVE TO TRENCHING THROUGH ROOTS. IT SHALL BE PERFORMED UNDER THE SUPERVISION OF AN ISA CERTIFIED ARBORIST, AND NO ROOTS 1 INCH IN DIAMETER OR LARGER SHALL BE CUT.
6. THE GRADE SHALL NOT BE ELEVATED OR REDUCED WITHIN THE CRITICAL ROOT ZONE OF TREES TO BE PRESERVED WITHOUT THE PLANNING OFFICIAL'S AUTHORIZATION BASED ON RECOMMENDATIONS FROM A QUALIFIED PROFESSIONAL. THE PLANNING OFFICIAL MAY ALLOW COVERAGE OF UP TO ONE HALF OF THE AREA OF THE TREE'S CRITICAL ROOT ZONE WITH LIGHT SOILS (NO CLAY) TO THE MINIMUM DEPTH NECESSARY TO CARRY OUT GRADING OR LANDSCAPING PLANS, IF IT WILL NOT IMPERIL THE SURVIVAL OF THE TREE. AERATION DEVICES MAY BE REQUIRED TO ENSURE THE TREE'S SURVIVAL.

SYMBOL LEGEND

SEE TITLE BLOCK SHEET A0.0 FOR COMPLETE SYMBOL INDEX.

ASSOCIATED PERMIT

CALUP #21-122594 LO

*REFER TO FOR ENCROACHMENTS INTO WETLAND BUFFER SETBACK

MEDICI ARCHITECTS

11711 SE 8ST STREET, SUITE 100
BELLEVUE, WASHINGTON 98005
TEL: (425) 453-9298
FAX: (425) 452-8448

REGISTRATION:

6926 REGISTERED ARCHITECT
EMILY D. BUCHHALTER
STATE OF WASHINGTON

INTAKE DATE: 01/18/2022

REVISIONS:		DATE:
1	CALUP CORRECTION LETTER	11/21/22
2	CORRECTION LETTER	03/30/22

PROJECT / CLIENT:

OLTEANU RESIDENCE - 807 128TH AVE SE

ADRIAN AND ELENA OLTEANU

JOB ADDRESS:
807 128TH AVE SE
BELLEVUE, WA 98005

DRAWING NAME:

SITE PLAN

Drawn By: KKH
Checked By: JK
Owner Approval:

PHASE:

CONSTRUCTION DRAWINGS

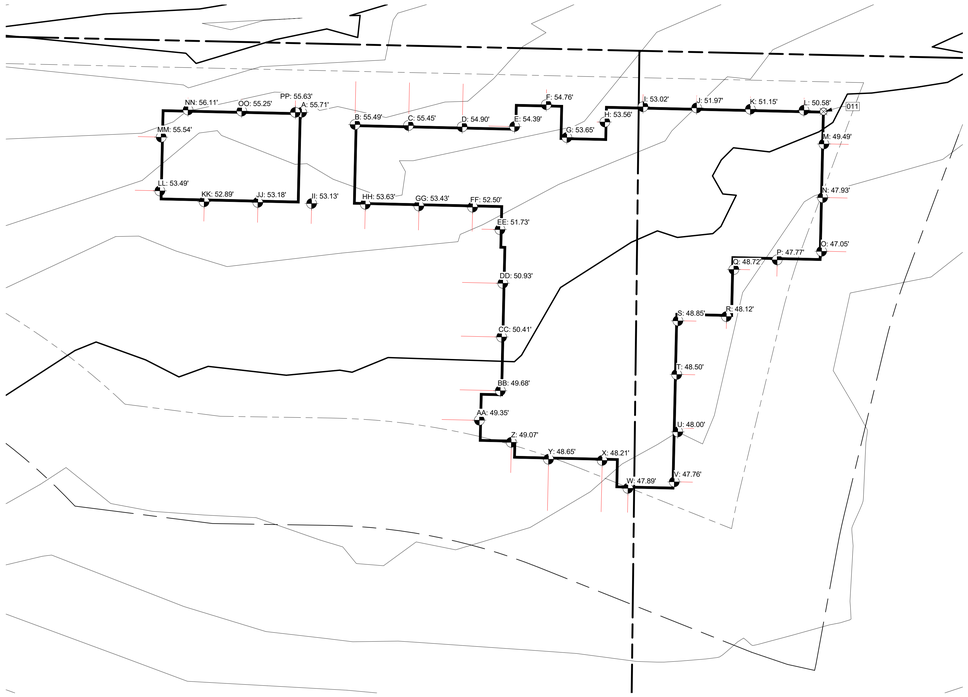
APPROVED FOR CONSTRUCTION:

PROJECT No.: A21 104

DATE: 12/5/2022

PLOT SCALE: 1:1

A0.1



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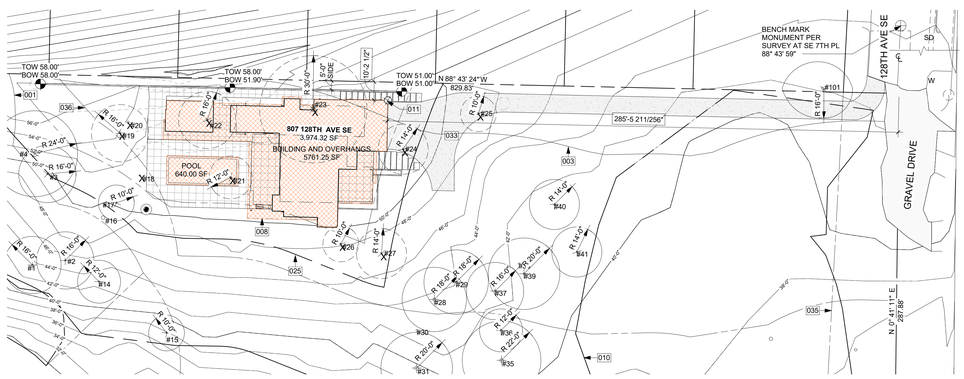
AVERAGE ELEVATION DIAGRAM 1
1" = 10'-0"

AVERAGE ELEVATION CALCULATION

MIDPOINT ELEV.	
A	55.71'
B	55.49'
C	55.45'
D	54.90'
E	54.39'
F	54.76'
G	53.65'
H	53.56'
I	53.02'
J	51.97'
K	51.15'
L	50.58'
M	49.49'
N	47.93'
O	47.05'
P	47.77'
Q	48.72'
R	48.12'
S	48.85'
T	48.50'
U	48.00'
V	47.76'
W	47.89'
X	48.21'
Y	48.65'
Z	49.07'
AA	49.07'
BB	49.68'
CC	50.41'
DD	50.93'
EE	51.73'
FF	52.50'
GG	53.43'
HH	53.63'
II	53.13'
JJ	53.18'
KK	52.89'
LL	53.49'
MM	56.54'
NN	56.11'
OO	55.25'
PP	55.63'

TOTAL =2,167.24 / 42

AVERAGE BUILDING ELEV.:		51.60
MAX HEIGHT ALLOWED	=	30' +5'
MAX ELEVATION	=	86.60
PROPOSED TOP OF BLDG	=	86.15'
AMOUNT BELOW MAX	**=**	**0.45'**



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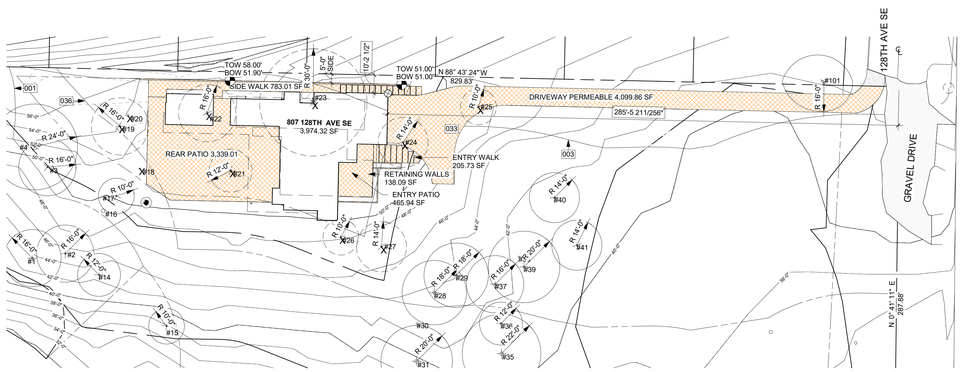
LOT COVERAGE DIAGRAM 2
1" = 30'-0"

LOT COVERAGE CALCULATION

LOT SIZE	173,655 SF
CRITICAL AREAS EXCLUDING OVERLAP:	
WETLAND	72,829.00 SF
STEEP SLOPE	8,534.80 SF
100- YEAR FLOOD PLAIN	16,306.52 SF
STREAM BUFFER	55,644.26 SF
AREA FOR LOT COVERAGE	
TOTAL LOT SIZE - (CRITICAL AREAS + STREAM BUFFERS)	
173,655 - (153,314.58) =	20,340.42 SF
ALLOWABLE COVERAGE (35%)	7,119.15 SF
BUILDING AND OVERHANG	5,761.25 SF
POOL	640.00 SF
TOTAL:	**6,401.25 SF**
PERCENT:	**31%**



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IMPERVIOUS SURFACE DIAGRAM 3
1" = 30'-0"

IMPERVIOUS SURFACE CALCULATION

LOT SIZE	173,655.00 SF
ALLOWABLE HARD SURFACE (75%)	130,241.25 SF
ALLOWABLE IMPERVIOUS SURFACE (45%)	78,144.75 SF
IMPERVIOUS AREA:	
ENTRY PATIO	475.65 SF
ENTRY WALK	205.73 SF
RETAINING WALLS	138.09 SF
REAR PATIO	3,339.01 SF
SIDE WALK	783.01 SF
TOTAL IMPERVIOUS SURFACE:	**4,941.49 SF**
PERCENT:	**.03%**
PERVIOUS AREA:	
DRIVEWAY	4,239.55 SF
TOTAL HARD SURFACE:	**9,181.04 SF**
PERCENT:	**.05%**

CALL 48 HOURS BEFORE YOU DIG 811 OR 1-800-424-5555

MEDICI ARCHITECTS

11711 SE 8ST STREET, SUITE 100
BELLEVUE, WASHINGTON 98005
TEL: (425) 453-9298
FAX: (425) 452-8448

REGISTRATION:

6926 REGISTERED ARCHITECT
EMILY D. BUCHWALTER
STATE OF WASHINGTON

INTAKE DATE: 01/18/2022

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1	CALUP CORRECTION LETTER	11/21/22

PROJECT / CLIENT:

OLTEANU RESIDENCE - 807 128TH AVE SE
ADRIAN AND ELENA OLTEANU

JOB ADDRESS:
807 128TH AVE SE
BELLEVUE, WA 98005

DRAWING NAME:
LOT COVERAGE DIAGRAM

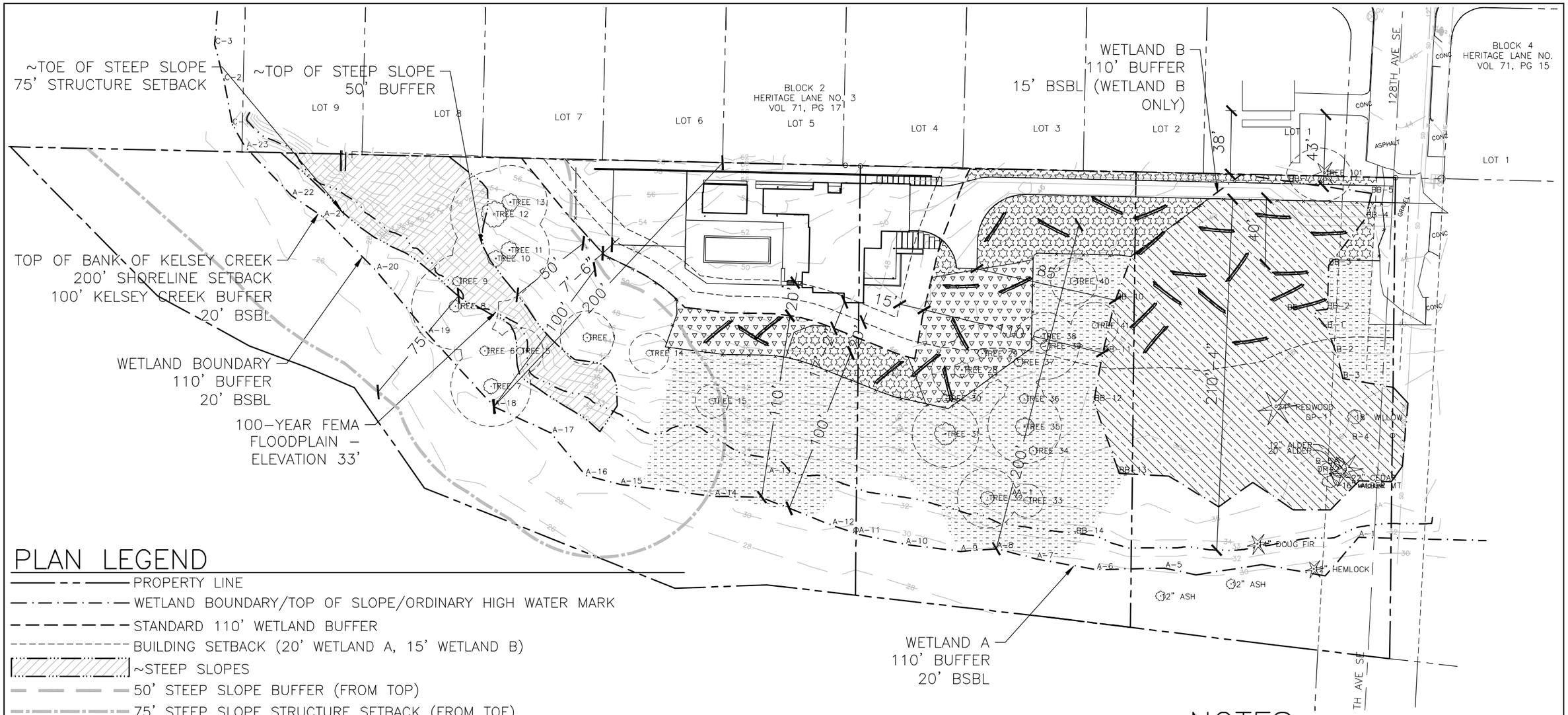
Drawn By: KKH
Checked By: JK
Owner Approval:

PHASE:
CONSTRUCTION DRAWINGS

APPROVED FOR CONSTRUCTION:

PROJECT No.: A21 104
DATE: 12/5/2022
PLOT SCALE: 1:1

A0.2



PLAN LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY/TOP OF SLOPE/ORDINARY HIGH WATER MARK
- STANDARD 110' WETLAND BUFFER
- BUILDING SETBACK (20' WETLAND A, 15' WETLAND B)
- ~STEEP SLOPES
- 50' STEEP SLOPE BUFFER (FROM TOP)
- 75' STEEP SLOPE STRUCTURE SETBACK (FROM TOE)
- 100-YEAR FEMA FLOODPLAIN (APPROXIMATE BASED ON 33' FEMA ELEVATION
- CONSTRUCTION FENCING AND EROSION CONTROL
- LARGE WOODY DEBRIS

MITIGATION LEGEND

- WETLAND ENHANCEMENT - 25,153 SF (0.58 ACRES)
- BUFFER ENHANCEMENT WITH BLACKBERRY REMOVAL AND PLANTING WITH TREES, SHRUBS AND GROUNDCOVER - 7,915 SF (0.18 ACRES)
- BUFFER ENHANCEMENT WITH BLACKBERRY REMOVAL AND PLANTING WITH SHRUBS IN AREA OF EXISTING NATIVE FERNS AND TREES - 6,488 SF (0.15 ACRES)
- BLACKBERRY/INVASIVE PLANT REMOVAL - 28,167 SF (0.65 ACRES)

TOTAL MITIGATION - 67,723 SF (1.56 ACRES)

SCALE
0 30 60
(FEET)
1 INCH = 60 FT

N

NOTES

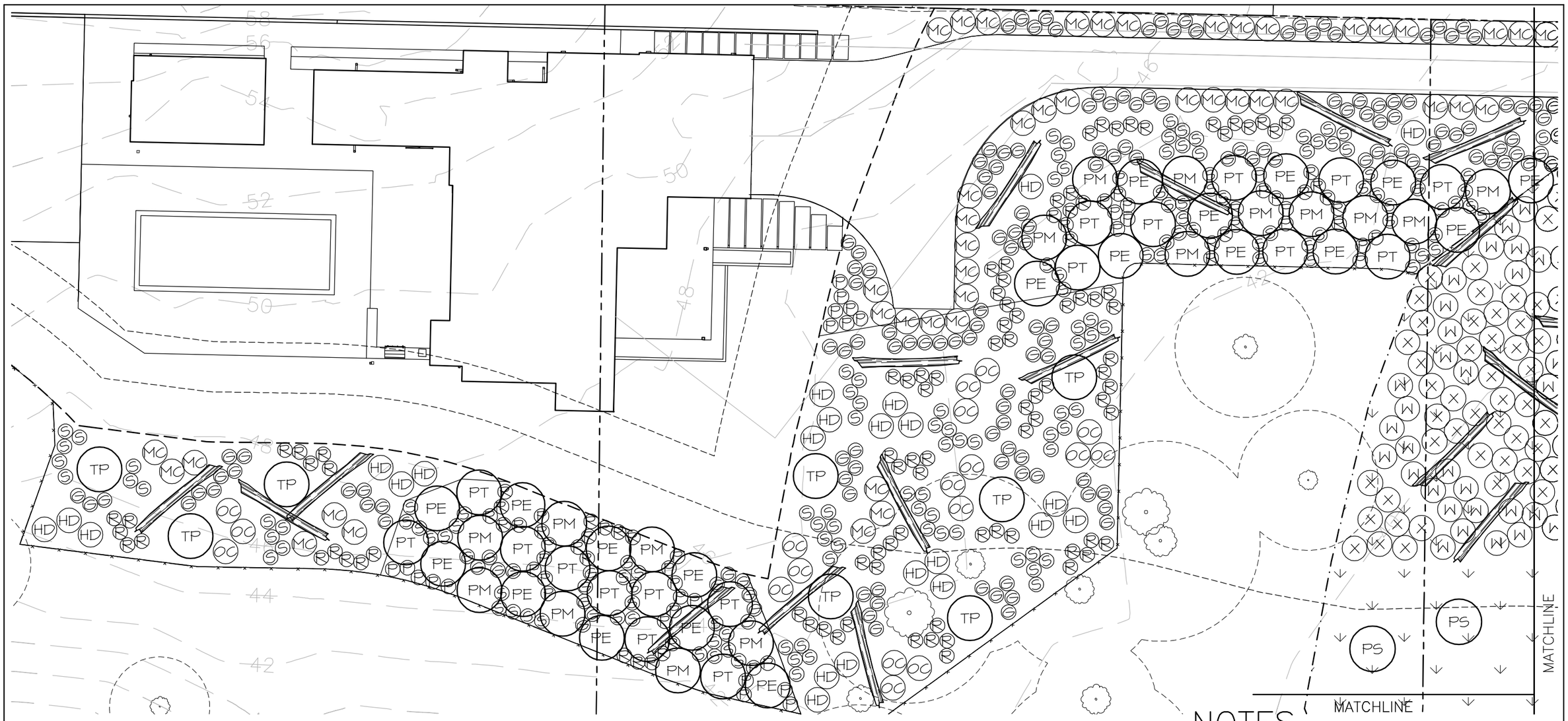
1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

AQUATICA
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PROPOSED MITIGATION
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	
21-368	
FIGURE 6 OF 10	

21-368-07-06-22-JARPA.DWG



PLANT LIST (SEE FIGURE 9 FOR SCHEDULE)

TREES

KEY	COMMON NAME
PS	SITKA SPRUCE
PT	QUAKING ASPEN
PE	BITTERCHERRY
PM	DOUGLAS FIR
W	PACIFIC WILLOW
TP	WESTERN RED CEDAR

SHRUBS

KEY	COMMON NAME
HD	OCEAN SPRAY
L	BLACK TWIN-BERRY
MC	PACIFIC WAX MYRTLE
OC	INDIAN PLUM
PC	PACIFIC NINEBARK
R	THIMBLEBERRY
C	SCOULER WILLOW
X	SITKA WILLOW
S	SNOWBERRY

GROUNDCOVER

KEY	COMMON NAME
G	SALAL
P	SWORD FERN

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

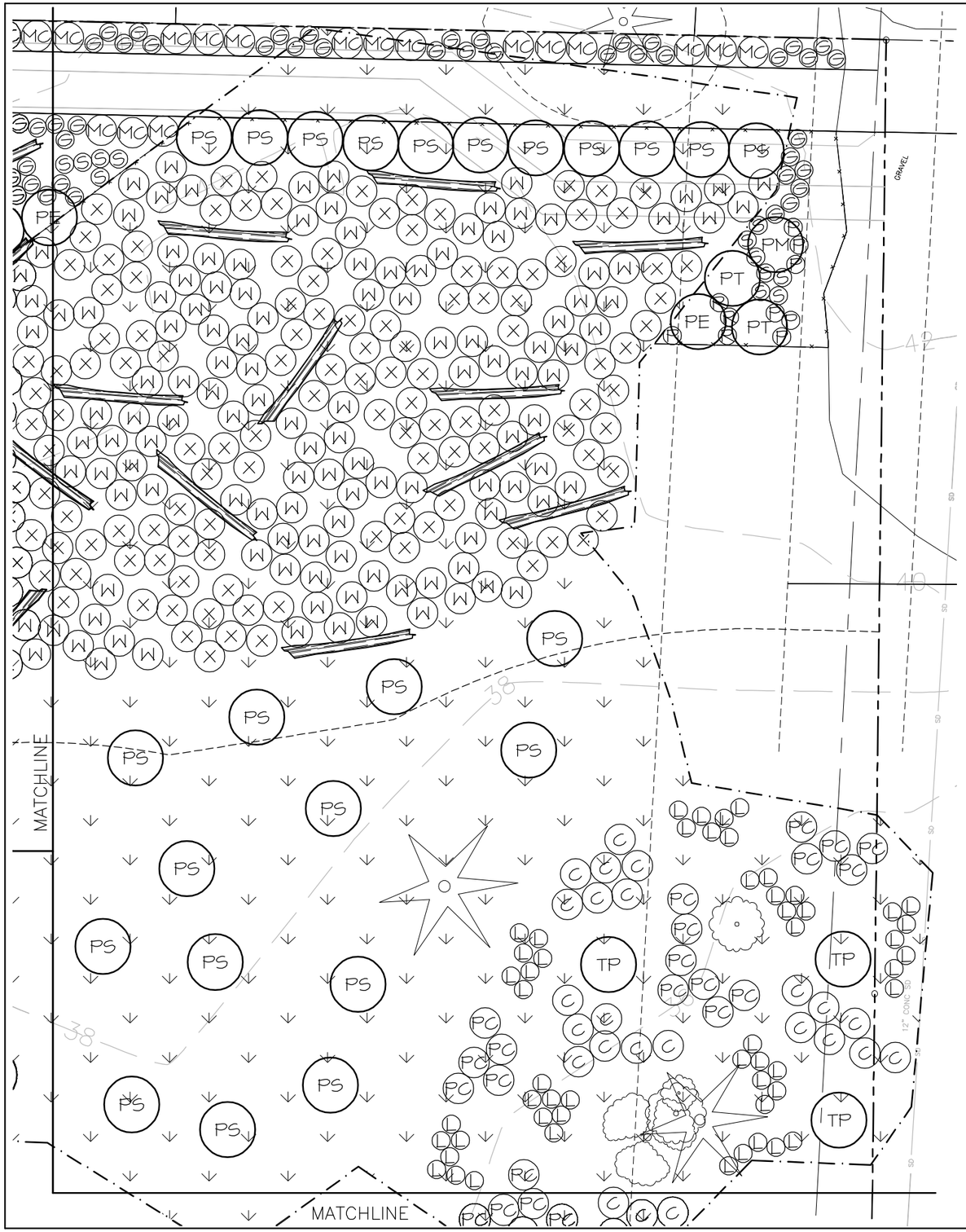
1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

AQUATICA
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PLANTING PLAN
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21-368
FIGURE 7 OF 10	

21-368-07-06-22-JARPA.DWG



PLANT LIST (SEE FIGURE 9 FOR SCHEDULE)

TREES

KEY	SCIENTIFIC NAME	COMMON NAME
PS	PICEA SITCHENSIS	SITKA SPRUCE
PT	POPULUS TREMULOIDES	QUAKING ASPEN
PE	PRUNUS EMARGINATA	BITTERCHERRY
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR
W	SALIX LASIANDRA	PACIFIC WILLOW
TP	THUJA PLICATA	WESTERN RED CEDAR

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK
R	RUBUS PARVIFLORUS	THIMBLEBERRY
C	SALIX SCOULERIANA	SCOULER WILLOW
X	SALIX SITCHENSIS	SITKA WILLOW
S	SYMPHORICARPOS ALBUS	SNOWBERRY

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME
G	GAULTHERIA SHALLON	SALAL
P	POLYSTICHUM MUNITUM	SWORD FERN

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

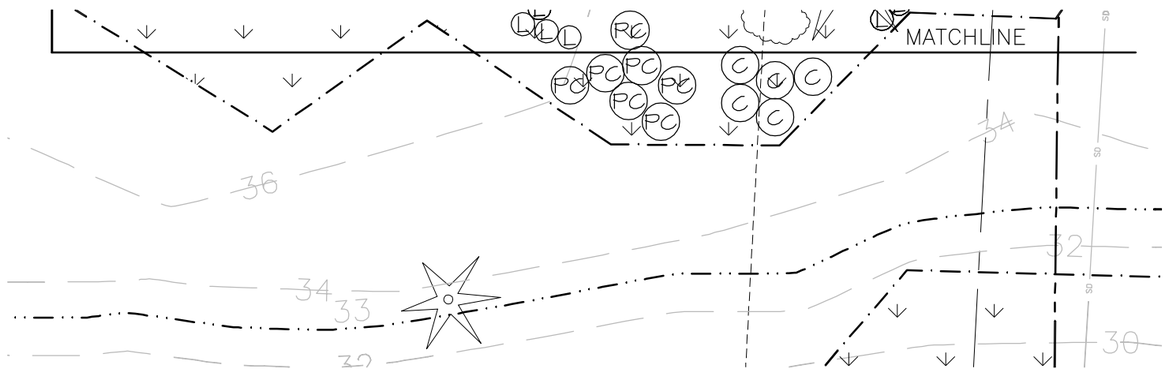
1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

AQUATICA
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PLANTING PLAN
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	
21-368	
FIGURE 8 OF 10	

21-368-07-06-22-JARPA.DWG



PLANT SCHEDULE

TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
PS	PICEA SITCHENSIS	SITKA SPRUCE	5 GAL.	AS SHOWN	28
PT	POPULUS TREMULOIDES	QUAKING ASPEN	2 GAL.	AS SHOWN	19
PE	PRUNUS EMARGINATA	BITTERCHERRY	2 GAL.	AS SHOWN	20
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	2 GAL.	AS SHOWN	17
W	SALIX LASIANDRA	PACIFIC WILLOW	2 GAL.	5' O.C.	149
TP	THUJA PLICATA	WESTERN RED CEDAR	5 GAL.	AS SHOWN	11

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	1 GAL.	5' O.C.	23
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	1 GAL.	3' O.C.	54
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	1 GAL.	5' O.C.	60
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GAL.	5' O.C.	18
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL.	5' O.C.	24
R	RUBUS PARVIFLORUS	THIMBLEBERRY	1 GAL.	3' O.C.	122
C	SALIX SCOULERIANA	SCOULER WILLOW	2 GAL.	5' O.C.	26
X	SALIX SITCHENSIS	SITKA WILLOW	2 GAL.	5' O.C.	151
S	SYMPHORICARPOS ALBUS	SNOWBERRY	1 GAL.	3' O.C.	152

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
G	GAULTHERIA SHALLON	SALAL	1 GAL.	3' O.C.	198
P	POLYSTICHUM MUNITUM	SWORD FERN	1 GAL.	3' O.C.	54

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

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P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PLANTING PLAN
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21-368
FIGURE 9 OF 10	

21-368-07-06-22-JARPA.DWG

SPECIFICATIONS

CONSTRUCTION/SPECIFICATIONS

- Prior to construction, the limits of work will be clearly staked at 20–foot intervals and all temporary erosion and sedimentation controls in place.
- Hazard trees proposed to be removed in the buffers shall be transformed into snags at a height less than their distance to new infrastructure to prevent future hazards. Removed trees on–site shall be preserved as needed to provide large woody debris as noted in the buffer.
- Sheet mulch all buffer areas to be planted. Do not sheet mulch native ferns. Do not sheet mulch wetland areas. Mulch shall be a minimum of 4" of coarse wood chips such as arborist chips.
- Species substitution shall not be made without approval of wetland biologist.
- Plants shall be locally grown (western Washington or Oregon), of normal health, vigorous, and free of weeds, diseases, insects, insect eggs and larvae.
- Container grown plants shall not be loose in container and shall not be pot–bound.
- B&B plant material shall not have cracked or mushroomed root balls. Root balls shall be firm, natural balls of earth of sufficient size to encompass the fibrous and feeding rooting system necessary for establishment and health of plant.
- Do not prune plants prior to delivery or planting.
- Take all precautions and customary good trade practices in preparing plants for transport. Cover plants transported on open vehicles with a protective covering to prevent wind burn.
- Protect plants from drying out. Bare root and B&B plant material shall have their roots kept moist at all times. Protect from freezing, wind, and sun. If planting is delayed by more than 24 hours, cover roots/root balls with sawdust, compost, or soil. Water plants as necessary.
- Water plants within 24 hours of planting.
- All receipts for labor and materials shall be retained for submittal to the County if requested.
- The bond holder shall replace any plants that die within the first year following approval of installation.

SHRUB AND TREE SOURCES

STORM LAKE GROWERS
MONROE, WA
(360) 794–4842

TADPOLE HAVEN NATIVE PLANTS
WOODINVILLE, WA
(425) 788–6100

OXBOW FARMS
CARNATION, WA
(425) 788–1134
EXT. 4

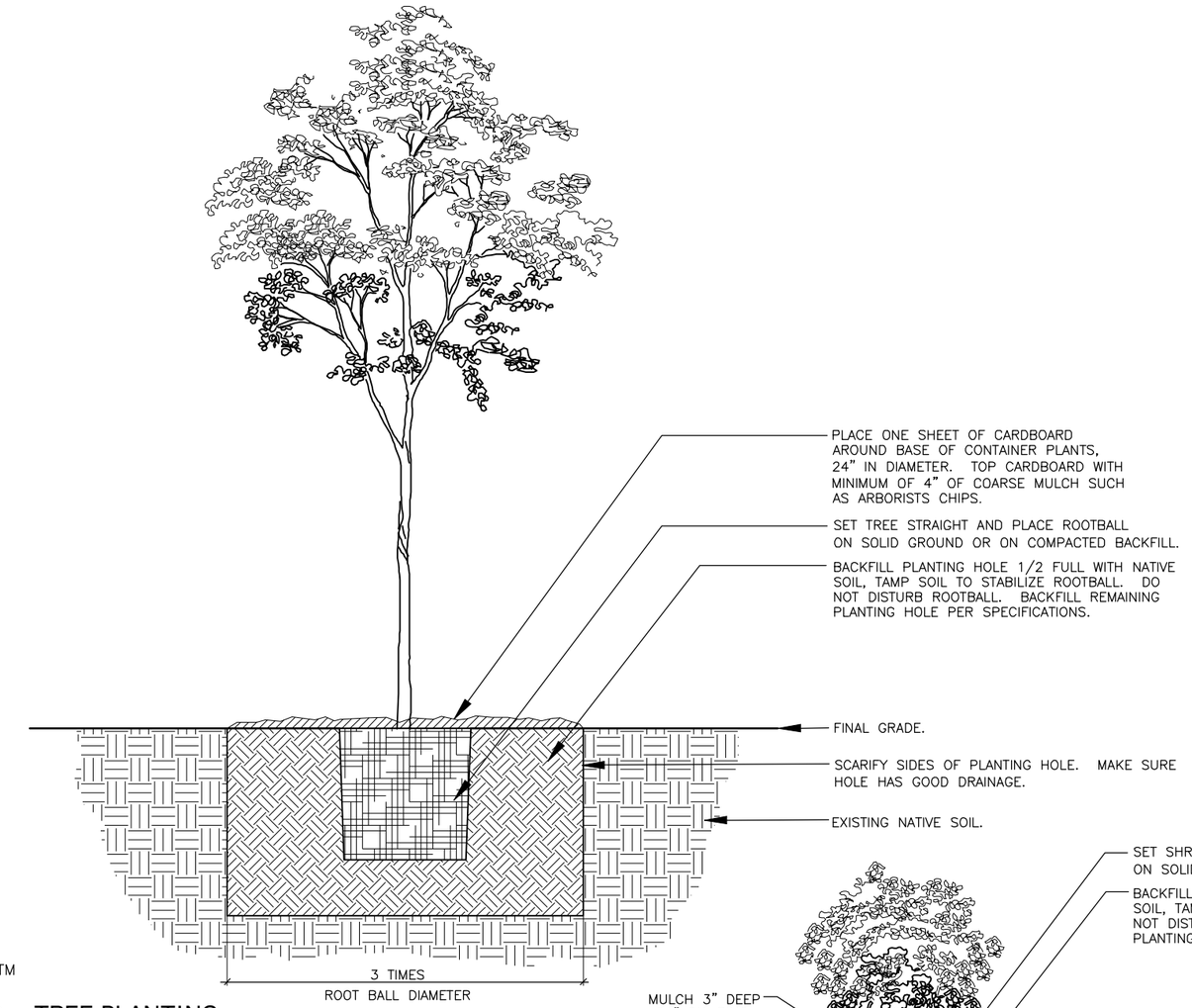
KING COUNTY CONSERVATION DISTRICT
HTTP://KINGCD.ORG/PROGRAMS–NATIVE–WALK–UP–SALE.HTM

SEED SOURCES:

PLANTAS NATIVA
BELLINGHAM, WA
(360) 715–9655

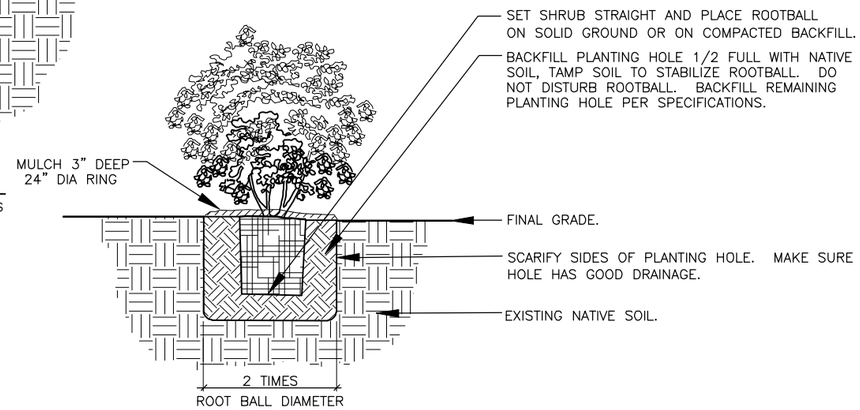
INSIDE PASSAGE SEEDS
PORT TOWNSEND, WA
(360) 385–6114

FROSTY HOLLOW ECOLOGICAL RESTORATION
LANGLY, WA
(360) 579–2332



1 TREE PLANTING

Scale: NTS



2 SHRUB PLANTING

Scale: NTS

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DETAILS AND SPECIFICATIONS
OLTEANU PROPERTY
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BELLEVUE, WASHINGTON
PARCELS 0424059110, –9111, –9112

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KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21–368
FIGURE	10 OF 10

21–368–07–06–22–JARPA.DWG

Critical Area Report and Wetland Mitigation and Bank Use Plan
Olteanu Property

Parcels# 042405-9110, 042405-9111, and 042405-9112
Bellevue, Washington

Prepared For:

Adrian and Elena Olteanu

Prepared By:

Aquatica Environmental Consulting, LLC
PO Box 308
Duvall, Washington 98019

July 2022

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LIST OF APPENDICES

1.0 INTRODUCTION

This Critical Area Report and Mitigation Plan have been prepared for a proposed single-family residence in the City of Bellevue. The intent of this report is to describe previously delineated wetlands on the undeveloped property and summarize their regulatory constraints and requirements for development of the property in support of a Critical Area Land Use Permit (CALUP) from the City of Bellevue. The applicant proposes to build a single-family home and an entry road to access it from 128th Avenue SE, which will impact wetland and buffer. This report includes a mitigation plan, which will identify compensatory actions for wetland and buffer impacts. Consultant qualifications are included in **Appendix A**.

The project is located on three parcels that total 3.99 acres in size and is located about a half mile east of Interstate 405 north of the Lake Hills Connector (**Figure 1**). Single family homes border the northern property boundary, 128th Avenue SE borders the eastern property boundary, and the southern edge borders undisturbed wetlands associated with Kelsey Creek in a City-owned Park (Kelsey Creek Park). The property is in the NE ¼ of Section 4, Township 24 North, and Range 5E. W.M. These parcels are located in the Water Resource Inventory Area #8, the Cedar-Sammamish Watershed and are in the Kelsey Creek drainage basin.

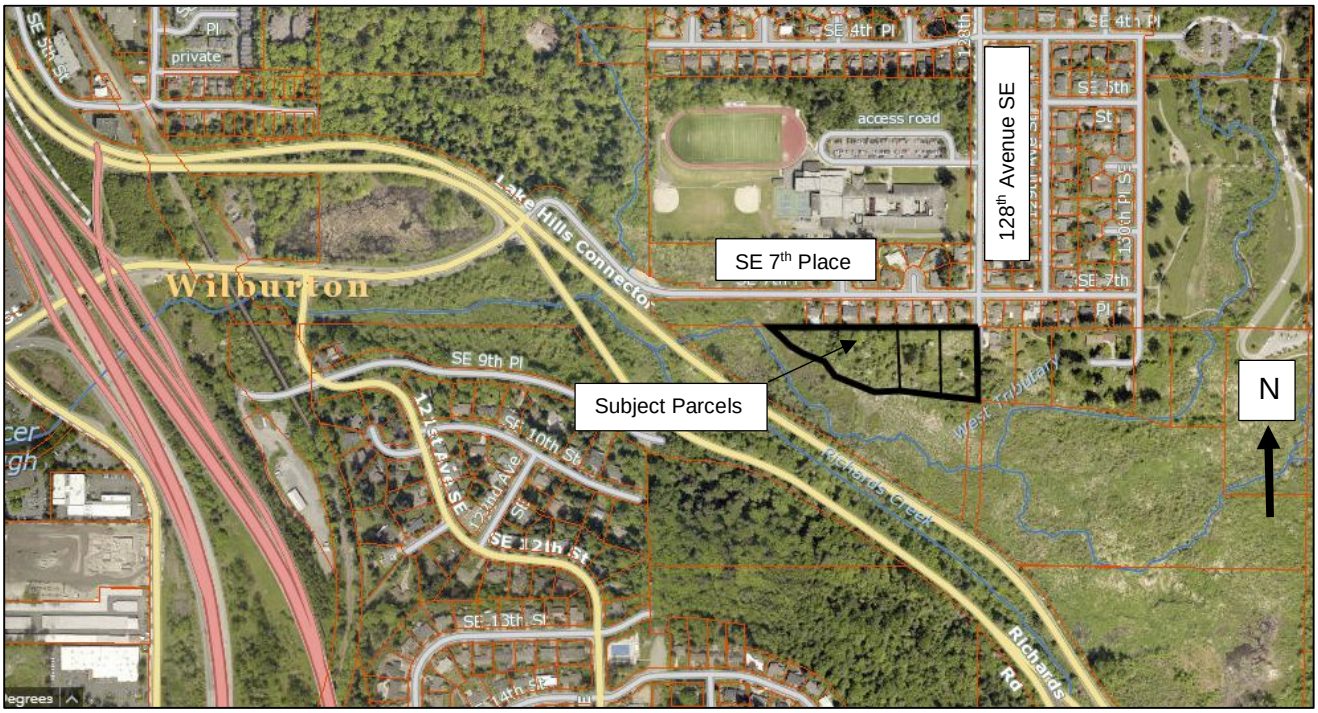


Figure 1. Vicinity Map (King County 2021)

2.0 CRITICAL AREAS and EXISTING CONDITIONS

The project site has several critical areas on-site. Wetlands are present along the southern property line as well as on the eastern portion of the property. Kelsey Creek is located off-site to the south and there are regulatory steep slopes in the western end of the site. The 100-year floodplain of Kelsey Creek also extends onto the site, and consequently the property is within the shoreline jurisdiction. Critical areas are described in more detail below.

2.1 Wetlands

Wetlands on the property were delineated by The Watershed Company and described in a Wetland Delineation Report dated August of 2020. One Category I wetland was identified by the Watershed Company on the property and shown extending off-site to the northwest, west and south (**Figures 2** and **3**). This wetland is associated with Kelsey Creek, which is located off-site to the south. This wetland has been designated as Wetland A, and has three vegetation classes present: palustrine forested, scrub shrub and emergent. The majority of Wetland A is seasonally flooded and hydrology is from a high groundwater table, seasonal flooding, and the wetland also receives stormwater from surrounding urban areas. Soils near the wetland delineation edge are a sandy loam or clay loam.

Photo 1. Wetland A to the south of the project area (no disturbance planned in this area)

Aquatica Environmental Consulting delineated a small portion of the wetland that extends from the western corner of the property where The Watershed Company delineation ended up to SE 7th Street. This portion of the wetland is on City property and was completed to determine the wetland location south of SE 7th Street, so that the feasibility of alternative access points to the property could be explored. The wetland in this area is contiguous Wetland A and conditions similar to those described in The Watershed Company 2020 report. An additional small area of the wetland edge was delineated to identify the upland area between Wetlands A and B, which are separate wetlands. This section of the delineation and rating forms for the separate Wetland B are documented in wetland datasheets and rating forms included in a summary letter in **Appendix B**. The separation between Wetlands A and B was verified by staff from the Army Corps of Engineers and the Washington State Department of Ecology in May of 2022. The methodology used to delineate this area was the same as described in The Watershed Company report.

Wetland B is located on a gradual slope and is palustrine, saturated wetland with forested, scrub shrub and emergent vegetation classes. This wetland has minimal surface water only following heavy rainfall events during the wet season and does not have sustained inundation. Kelsey Creek is not connected to Wetland B.

The parcels are vegetated with a combination of invasive and native vegetation. Vegetation in the tree layer of Wetland A includes species of willow (*Salix* spp.) Oregon ash (*Fraxinus latifolia*), red alder (*Alnus rubra*), black cottonwood, and Sitka spruce (*Picea sitchensis*). Common shrubs include Douglas' spiraea (*Spiraea douglasii*), clustered rose (*Rosa pisocarpa*), black twinberry (*Lonicera involucrata*), and salmonberry (*Rubus spectabilis*). The herbaceous layer includes lady fern (*Athyrium filix-femina*), reed canary grass (*Phalaris arundinacea*), and creeping buttercup (*Ranunculus repens*). Native species dominate within most of the wetland. Much of Wetland B dominated by reed canarygrass and Armenian blackberry, both noxious weeds.

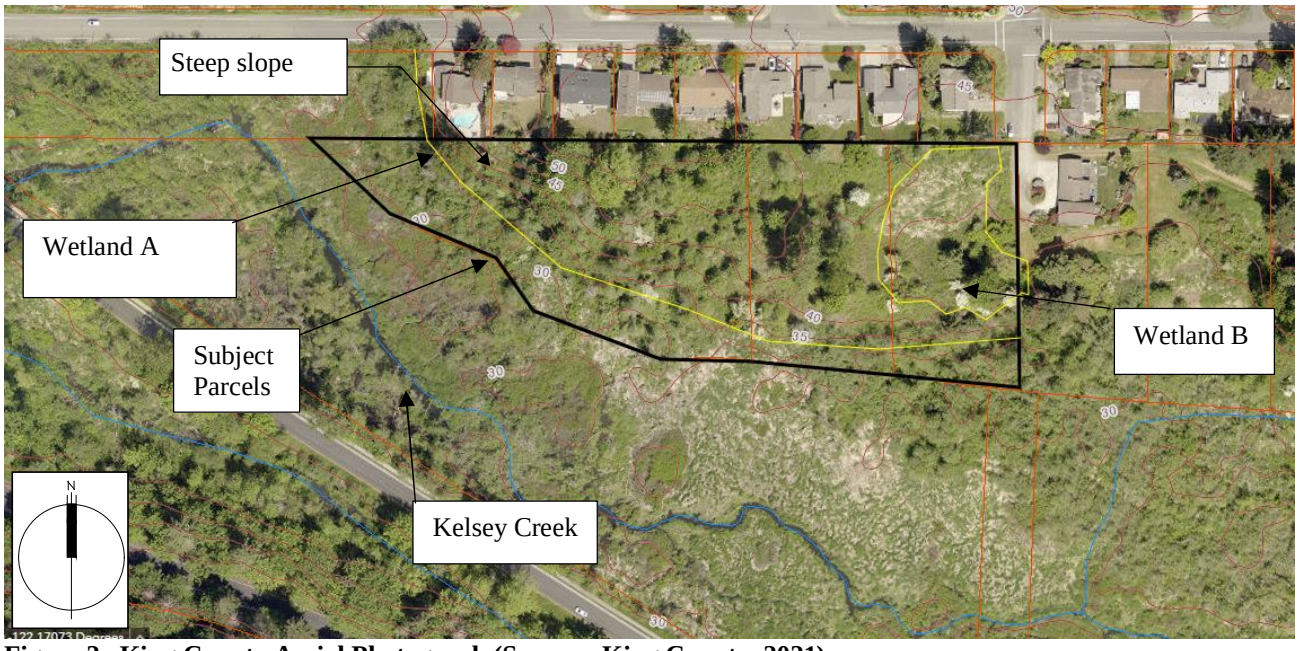
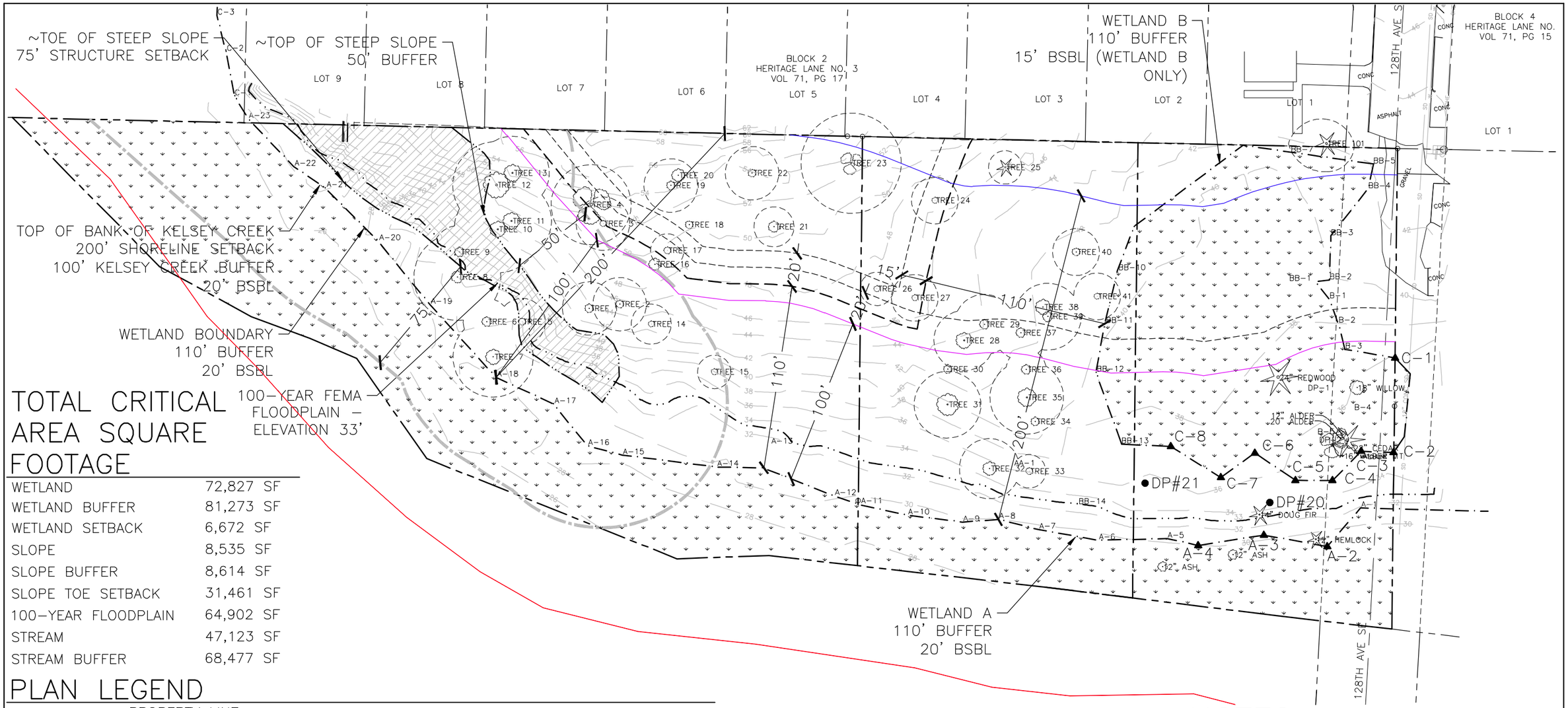


Figure 2. King County Aerial Photograph (Source: King County, 2021)



TOTAL CRITICAL AREA SQUARE FOOTAGE

WETLAND	72,827 SF
WETLAND BUFFER	81,273 SF
WETLAND SETBACK	6,672 SF
SLOPE	8,535 SF
SLOPE BUFFER	8,614 SF
SLOPE TOE SETBACK	31,461 SF
100-YEAR FLOODPLAIN	64,902 SF
STREAM	47,123 SF
STREAM BUFFER	68,477 SF

PLAN LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY/TOP OF SLOPE/ORDINARY HIGH WATER MARK
- STANDARD 110' WETLAND BUFFER
- 100' KELSEY CREEK BUFFER
- 200' KELSEY CREEK SHORELINE SETBACK
- BUILDING SETBACK (20' WETLAND A, 15' WETLAND B)
- ~STEEP SLOPES
- 50' STEEP SLOPE BUFFER (FROM TOP)
- 75' STEEP SLOPE STRUCTURE SETBACK (FROM TOE)
- 100-YEAR FEMA FLOODPLAIN (APPROXIMATE, BASED ON 33' FEMA ELEVATION)
- ~ACTIVE FLOODPLAIN/FEMA FLOODWAY (APPROXIMATED BASED ON FEMA FIRMETTE MAP)
- ▲ WETLAND FLAG LOCATION/TOP OF BANK OF KELSEY CREEK
- ● DATA POINT

SCALE
0 30 60
(FEET)
1 INCH = 60 FT

N

NOTES

1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
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DUVALL, WA 98019
T 425.802.8988

EXISTING CONDITIONS
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

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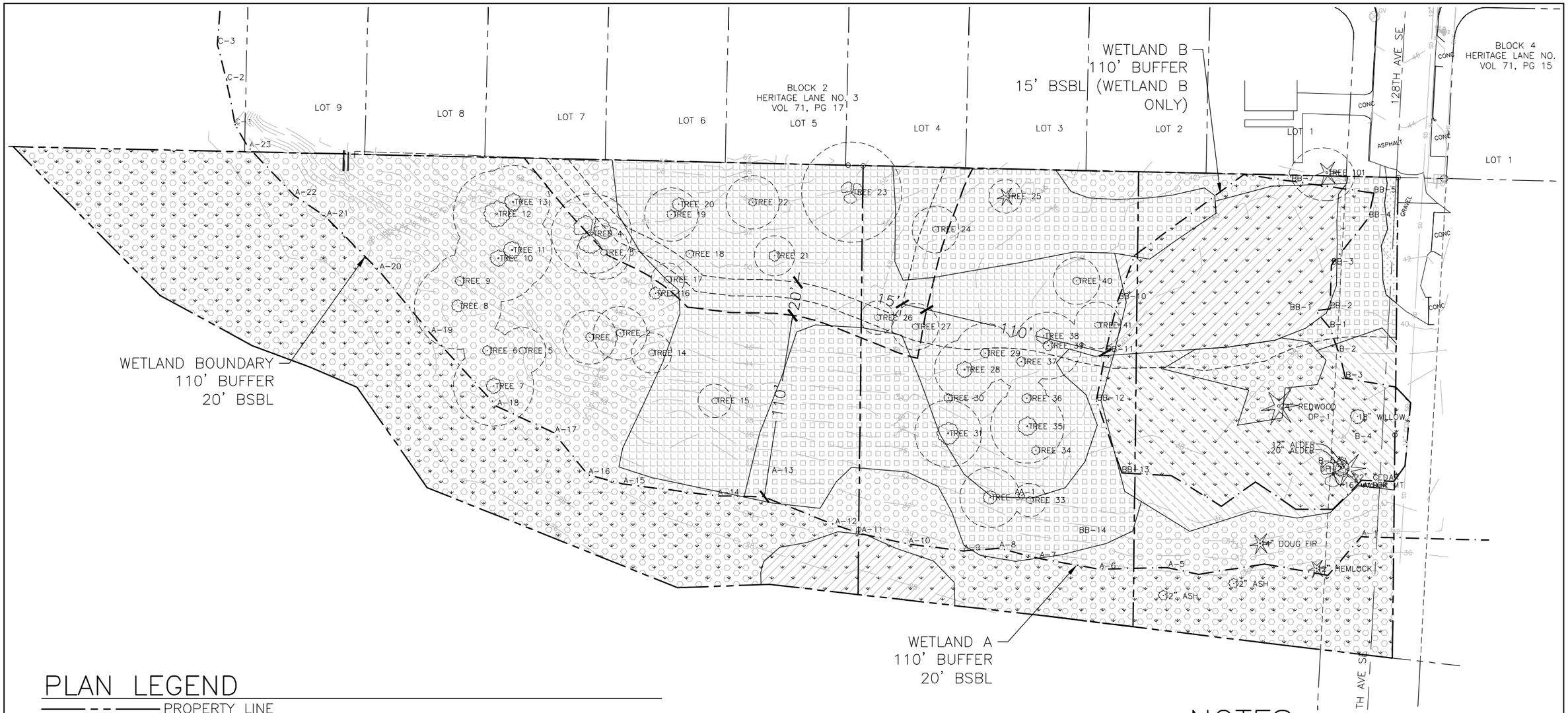
SCALE AS NOTED	DATE 07.06.22
PROJECT NO. 21-368	
FIGURE 3 OF 10	

21-368-07-06-22-JARPA.DWG

The western third of the buffer on the property is vegetated primarily with native species. Common plants in the buffer in this area include bigleaf maple (*Acer macrophyllum*), bitter cherry (*Prunus emarginata*), Oregon ash, Sitka willow (*Salix sitchensis*), black cottonwood, sword fern (*Polystichum munitum*), oceanspray (*Holodiscus discolor*), osoberry (*Oemleria cerasiformis*), and western hazelnut (*Corylus cornuta*). The remaining buffer area on the property is densely vegetated with invasive Armenian blackberry (*Rubus armeniacus*) where it forms dense thickets with no other vegetation or where it dominates the forested understory. **Figure 4** includes a map of the vegetation on the property.

Photo 2. Wetland A buffer with Armenian blackberry in the understory

Wetland buffer widths are assigned according to the overall wetland rating and habitat score as assessed using the Wetland Rating System for Western Washington (DOE, 2014), as well as the site's development status. Wetland A was classified as a Category I wetland with seven habitat points using the DOE rating system. According to LUC 20.25H.075, the property is classified as undeveloped, which assigns a 110-foot wetland buffer and a 20-foot structure setback. Wetland B was categorized by the Department of Ecology as a Category III wetland. Despite the lower wetland category it requires the same buffer width due to the habitat score, which is in the overall moderate category primarily due to its proximity to Kelsey Creek and the larger, higher value Wetland A. **Figure 3** depicts the wetland boundaries and buffer setbacks. **Table 1** summarizes the wetland attributes.



PLAN LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY/TOP OF SLOPE/ORDINARY HIGH WATER MARK
- STANDARD 110' WETLAND BUFFER
- BUILDING SETBACK (20' WETLAND A, 15' WETLAND B)
- NATIVE VEGETATION – 82,645 SF
- MIXED NATIVE AND INVASIVE VEGETATION – 14,258 SF
- REED CANARYGRASS – 13,326 SF
- SCATTERED TREES WITH BLACKBERRIES AND FERNS IN THE GROUNDCOVER LAYER – 36,272 SF
- DENSE BLACKBERRIES/NONNATIVE VEGETATION – 26,689 SF
- GRAVEL – 558 SF

SCALE
0 30 60
(FEET)
1 INCH = 60 FT

N

NOTES

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BELLEVUE, WASHINGTON
PARCELS 0424059110, –9111, –9112

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KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21–368
FIGURE 4 OF 10	

21–368–07–06–22–JARPA.DWG

Table 1. Rating System Summary

Wetland A			
	FUNCTION		
	Improving Water Quality	Hydrologic	Habitat
Site Potential	High	Moderate	High
Landscape Potential	Moderate	High	Low
Value	High	High	High
Score	8	8	7
Total Points	23, Category I		
Wetland B			
	FUNCTION		
	Improving Water Quality	Hydrologic	Habitat
Site Potential	Moderate	Moderate	Moderate
Landscape Potential	Moderate	Moderate	Low
Value	High	Low	High
Score	7	5	6
Total Points	18, Category III		

2.2 Stream

The main channel of Kelsey Creek is located off-site to the south in Kelsey Creek Park, which is adjacent to the southern and western property boundaries. Kelsey Creek is a fish bearing stream and classified as Type F by the Bellevue LUC 20.25H.075(B)(2). Undeveloped sites require a Type F stream be provided with a buffer of 100 feet (LUC 20.25H.075(C)(1.a.ii) and a structure setback of 20 feet (LUC 20.25H.075(D)). The Watershed Company noted that they did not delineate Kelsey Creek, as the wetland has the more restrictive buffer. The City of Bellevue has requested that the project show the location of the top of bank. Although the wetland has the larger buffer, shoreline jurisdiction is measured from the stream. Aquatica visited the site on January 26, 2022 and evaluated the site for the location of the top of bank. The City defines the top of bank as follows:

> *A. The point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 at any point for minimum distance of 50 feet measured perpendicularly from the break; and*
>
> *B. For a floodplain area not contained within a ravine, the edge of the active floodplain of a stream where the slope of the land beyond the edge is flatter than 3:1 at any point for a minimum distance of 50 feet measured perpendicularly from the edge. (Ord. 5683, 6-26-06, § 51)*

State and federal agencies typically measure buffer widths from the ordinary high water mark, which is defined as follows:

> *"That mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition*

> *exists on June 1, 1971, as it may naturally change thereafter, or at it may change thereafter in accordance with permits issued by a local government or the Department of Ecology.*

Kelsey Creek has a flat, nearly horizontal floodplain, the majority of which is also Wetland A. Floodwaters from active channel of the creek extend across Wetland A, until they reach to toe of the slope on the subject property, which abruptly slopes upward. There is a distinct boundary here that corresponds to both the wetland boundary with the ordinary high water mark and the City's definition of top of bank. Because this location is essentially the same for all these features it was not delineated separately, and the wetland boundary represents all of these lines. The following photo depicts this edge, which shows the obvious transition from the wetland that is seasonally flooded with water contributed in part from Kelsey Creek. See **Tables 2** and **3** for critical area square footage and buffer summaries.

Photo 3. Wetland Edge and Ordinary High Water Mark

2.3 Shoreline Overlay and Floodplain

The property is within the Shoreline Overlay area, which includes the adjacent wetlands that extend onto the site and are connected to the Kelsey Creek floodplain, as well as the 100-year floodplain. The 100-year flood plain extends onto this property, as is shown on **Figure 3,** based on the FEMA flood map elevation of 33 feet (FEMA, 2021). There is no clearing, grading, or development proposed in the 100-year floodplain. The FEMA floodway and active floodplain is located off-site. This property has an Urban Conservation shoreline designation.

2.4 Steep Slopes

Steep slopes are present on the western end of the site. Slopes more than 40% are regulated by LUC 20.25H.120 and require a top-of-slope buffer of 50 feet and a toe-of-slope structure setback of 75 feet. Steep slopes on the site have a slope up to 19 degrees (34% slope). Development is not proposed in steep slopes, their buffers, or slope setbacks.

Table 2. Total Critical Area

	Area in Square Feet*
Wetland	72,827
Wetland Buffer	81,273
Wetland Setback	6,672
Slope	8,535
Slope Buffer	8,614
Slope toe setback	31,461
100-year floodplain	64,902
Stream	47,123
Stream Buffer	68,477

*These areas overlap

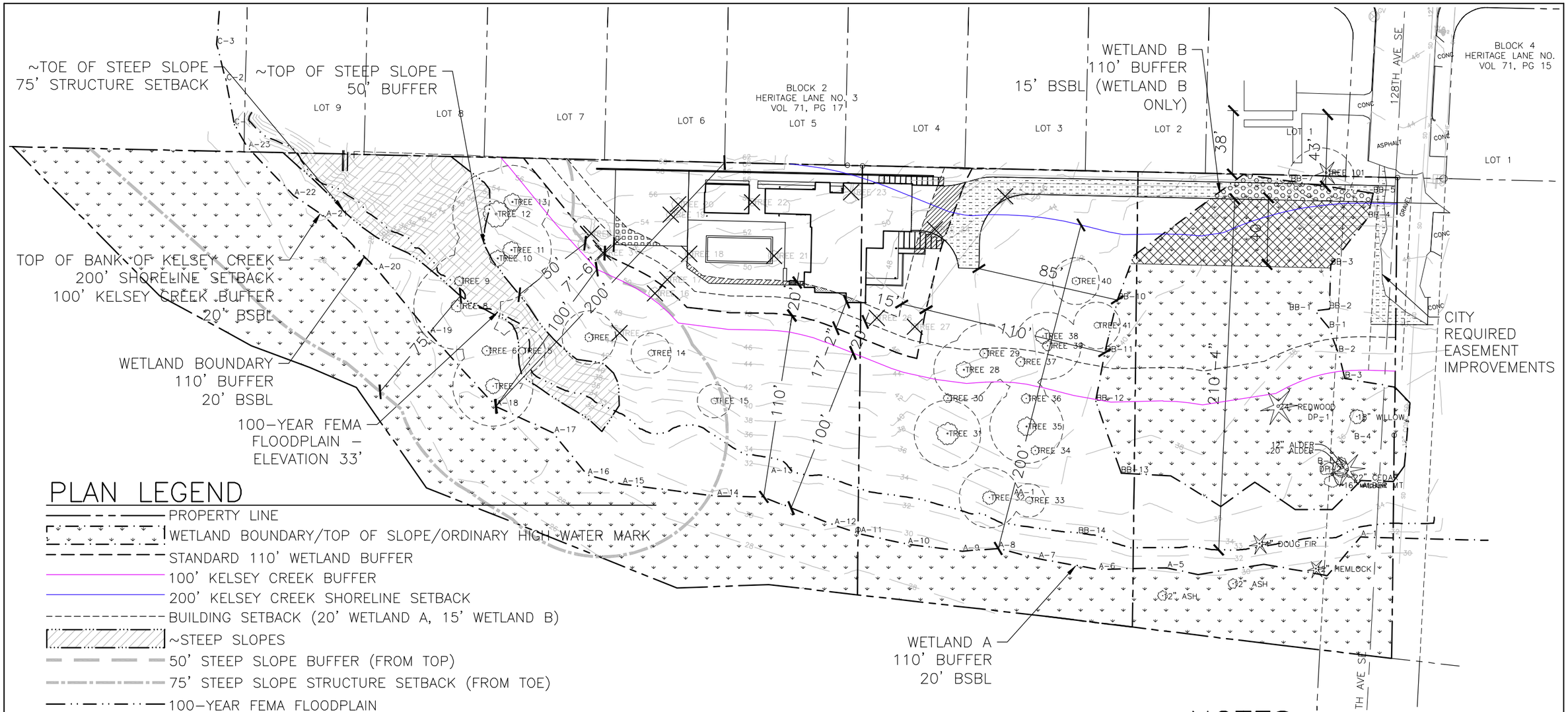
Table 3. Critical Area Buffers and Setbacks

	Category	**Standard Buffer (feet)***	**Structure Setback (feet)**
Wetland A	I	110	20
Wetland B	III	110	15
Stream	Type F	100	20
Slope	n/a	50 (from top)	75 (from toe)

*This is the undeveloped site buffer

3.0 PROPOSED PROJECT

The applicant is proposing to construct a new home and access driveway on the property (**Figure 5**). The home is proposed outside of critical areas and their buffers. The only feasible access point to the proposed homesite is from 128th Avenue SE, which will require crossing a small area of Wetland B and impacting a portion of its buffer for access to the home site and fire safety access turnaround. Wetland



PLAN LEGEND

- PROPERTY LINE
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- STANDARD 110' WETLAND BUFFER
- 100' KELSEY CREEK BUFFER
- 200' KELSEY CREEK SHORELINE SETBACK
- BUILDING SETBACK (20' WETLAND A, 15' WETLAND B)
- ~STEEP SLOPES
- 50' STEEP SLOPE BUFFER (FROM TOP)
- 75' STEEP SLOPE STRUCTURE SETBACK (FROM TOE)
- 100-YEAR FEMA FLOODPLAIN
- X — TREES TO BE REMOVED - REMOVED TREES IN BUFFER AREAS SHALL BE CONVERTED TO SNAGS AT A HEIGHT LESS THAN THE DISTANCE TO NEW INFRASTRUCTURE. LOGS FROM THE OTHER REMOVED TREES SHALL BE RETAINED ON-SITE AS NEEDED TO PROVIDE LARGE WOODY DEBRIS FOR WETLAND AND BUFFER ENHANCEMENT.

IMPACT LEGEND

- WETLAND IMPACT (DRIVEWAY) - 927 SF (0.02 ACRES)
- WETLAND BUFFER IMPACT (DRIVEWAY) - 3,256 SF (0.07 ACRES)
- INDIRECT WETLAND IMPACT - 4,450 SF (0.10 ACRES)
- STRUCTURE SETBACK IMPACT (HOUSE) - 48 SF
- STRUCTURE SETBACK IMPACT (DRIVEWAY/PAVING) - 827 SF
- STRUCTURE SETBACK IMPACT (SPORT COURT) - 223 SF
- TOTAL STRUCTURE SETBACK IMPACT - 1,098 SF

SCALE
0 30 60
(FEET)
1 INCH = 60 FT

N

NOTES

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SITE PLAN AND IMPACTS
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FIGURE	5 OF 10

21-368-07-06-22-JARPA.DWG

structure setback modification at the outer edge of the wetland setback is proposed. Development in the wetland structure setback is proposed for a small area of driveway and sport court. **Table 4** summarizes these impacts, and proposed impacts are discussed in more detail in the following sections.

Table 4. Proposed Impacts

	Driveway	Structure	Other	Total
Wetland Fill (direct impacts)	927 sf 0.02 ac	0	0	927 sf 0.02 ac
Indirect Wetland Impacts	4,450 0.10 ac	0	0	4,450 0.10 ac
Wetland Buffer Impacts	3,256 sf 0.07 ac	0	0	3,256 sf 0.07 ac
Wetland Structure Setback	827 sf Crosses setback for access	48 sf (house) Reducing by 2'10"	223 sf (sport court) Reducing by 16'9"	1,098 sf 0.02 ac

3.1 Code Section Alterations

The project is proposing wetland fill and modifying wetland buffers to accommodate site access, an allowed use per LUC 20.25H.055(B). This will require modification of the standard wetland buffer (LUC 20.25H.055(D) and wetland setback (LUC 20.25H.055(E). Additional modifications of the setback are proposed for small impacts into this area for the house and outdoor uses. The following sections address these proposed impacts as well as mitigation sequencing, LUC performance standards, cumulative impacts and habitat assessment.

3.2 Environmental Sequencing

The LUC 20.25H.215 (A-D) requires that projects utilize environmental sequencing to avoid, minimize, and mitigate project impacts. The code section is below in regular type, followed by an explanation of how the project meets each provision, in italics.

A. Avoiding the impact altogether by not taking a certain action or parts of an action;

Avoidance

Project impacts due to the driveway cannot be avoided. There is no alternative access to the buildable area outside of wetland and wetland buffers. Single family homes are located to the north of the building site, which does not allow access directly from the north. As requested in the pre-application meeting, the off-site, City-owned parcel to the northwest was investigated to determine if access could occur from SE 7th Place. Wetlands on the City parcel to the northwest were delineated and there is no potential driveway location that would not impact wetland. Further, the wetland in the northwest area is vegetated with native species, has a forested vegetation layer, and has ponded water even in summer. Impacts at this location would be greater than at the proposed location from 128th Avenue NE. Access through the City parcel would also disturb steep slopes and the native buffer vegetation in the western third of the site. See Photos 4 and 5, respectively the proposed driveway location from 128th Avenue NE and the northeastern edge of the City-owned parcel.

The City has also requested that the applicant explore the option of spanning the wetland with a bridge to avoid wetland impacts. Section 3.3 discusses in additional detail why a bridge is not technically feasible where it addresses LUC 20.25H(C)(2a i-v), which allows for new driveways in critical areas where no technically feasible alternative with less impact on the critical area or critical area buffer exists.

Photo 4. Photo of proposed driveway location through the reed canarygrass dominated portion of Wetland B, taken from 128th Avenue NE, looking to the northwest

Photo 5. Forested wetland area investigated for potential access from SE 7th Place. Photo taken from SE 7th Place looking to the south at Wetland A

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

Minimization

Impacts were minimized by locating the proposed driveway in a disturbed part of the wetland and buffer. To minimize wetland impacts, the road through the wetland will be constructed without side slopes along the south edge of the road to prevent additional wetland fill beyond the driveway width. This will require the construction of short walls or other means to prevent additional fill beyond the required road width for access. During the project pre-application meeting fire comments required a 20-foot road width and a hammerhead turn around, because the entry road was servicing three lots that could conceivably support three homes. The applicant has agreed to the significant concession of consolidating the lots into one to allow for a ten-foot driveway and a reduced turn around parking area at the house. This allows wetland fill to be reduced by approximately half as well as reduces the buffer impact and indirect wetland impacts.

C. Performing the following types of mitigation (listed in order of preference):

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

Project impacts proposed are permanent and will not be repaired, rehabilitated or restored. Mitigation for project impacts is provided as noted below under C(3). The project is not proposing any temporary impacts.

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

The impacts over time will be eliminated through implementation of the mitigation plan, and through a five-year maintenance and monitoring period. A Mitigation Monitoring and a Vegetation Plan, which detail how project impacts will be monitored to ensure success and protection of on-site critical areas, are also provided.

3. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

Mitigation for project impacts will include a combination of on-site wetland and buffer enhancement and as well as wetland reestablishment through mitigation at the Keller Farm Mitigation Bank. On-site mitigation is proposed to occur through invasive plant removal and extensive native plantings. On- and off-site mitigation are detailed in the mitigation and bank use plan sections.

D. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

A Monitoring Contingency Plan is provided in this report.

3.3 Performance Standards

LUC 20.25H.100 requires a set of general performance standards for development near wetlands and streams. These include management of project lighting, noise, toxic runoff, critical area intrusion measures, and limitations on chemical use in vicinity of critical areas. The code section is in regular type, how the project meets these is in italics.

LUC 20.25H.100 Development on sites with a wetland, Type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

A. Lights shall be directed away from the wetland.
The project will minimize light impacts into the wetland and stream buffers. The project is proposing planting species that have a dense evergreen habit on the edges of the development

area and driveway to minimize light intrusion from cars. Outdoor lighting on the house will meet the recommendations of the International Dark Sky Association.

B. Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the wetland or any noise shall be minimized through use of design and insulation techniques.

The proposed home will be adequately insulated to avoid noise generation. All residential uses are occurring outside of wetland buffers, with the exception of the driveway. All development is occurring adjacent to existing disturbance, a residential subdivision.

Stormwater plans show treatment occuring in the wetland and buffer. No discharge to the wetland is allowed and all stormwater must be treated before discharging to the buffer.

C. Toxic runoff from new impervious area shall be routed away from the stream.

Runoff from new impervious surfaces will not be directly discharged to wetlands or streams but will be treated and dispersed according to the required stormwater manual.

D. Treated water may be allowed to enter the wetland critical area buffer.

Treated stormwater will be dispersed into buffers on-site, as there is no alternative location. However, there will not be direct discharges directly to wetlands or streams.

E. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use.

The proposed mitigation plan is proposing dense plantings adjacent to all developed areas, except in the western portion of the site, which is already densely vegetated.

F. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the critical area buffers shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended. Due to the extensive buffers on-site, this will apply to the entire property.

G. All applicable standards of Chapter 24.06 BCC, Storm and Surface Water Utility Code, are met.

All applicable standards of Chapter 24.06 BCC, Storm and Surface Water Utility Code will be met.

LUC20.25H.055 (B) allows for the construction of new private access roads and driveways in wetlands and buffer when the performance standards of LUC20.25H.055 (C)(2)(a-b) are met, as described below.

a. New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. **A determination of technically feasible alternatives will consider:**

i. The location of existing infrastructure;

Spanning a wetland with a bridge to avoid direct wetland impacts is frequently done for wetlands that are high in value, easily spanned such as those located in ravines, or where maintaining connectivity to a wetland system that extends on both sides of the bridge is important for maintaining hydrological connectivity or wildlife passage. This wetland and the project impacts do not justify spanning the wetland. The wetland value in the crossing location is low. Wetland B, where impact is proposed is a Category III wetland and the area proposed for crossing is low value adjacent to existing development. It is dominated by weeds, has infrequent and minimal surface water and fill is proposed at the edge adjacent to a residential backyard. Spanning a wetland is important when there is something to preserve and connect it to. There is nothing to connect the wetland to and a weed dominated wetland with little hydrology does not justify the cost of a bridge.

ii. The function or objective of the proposed new or expanded facility or system;

The function and object of the driveway is to access the buildable portion of the property. There is no alternative for access do to higher quality wetlands to the northwest and south of the building area and single family homes to the north.

iii. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;

A subdivision to the north and wetlands to the west, south and east surrounds the buildable area and no other access location is available.

iv. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

The cost of avoiding disturbance is substantially disproportionate compared to the environmental impact. An engineer was contacted by the applicant and the cost to construct a bridge to avoid wetland fill would be several hundred thousand dollars. As noted above (item i), the environmental impact does not justify a bridge.

v. The ability of both permanent and temporary disturbance to be mitigated.

Due to the low value of the wetland in this location and mitigation opportunities, impacts can be mitigated.

b. If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

i. Location and design shall result in the least impacts on the critical area or critical area buffer;

The location was determined to have the least impact on critical areas and buffers, as noted in the mitigation sequencing section (Section 3.2). Proposed impacts are not avoidable and necessary to provide access to the area of the property unconstrained by wetlands, buffers, steep slopes and floodplain. No other location will provide the intended function with less impact.

ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

Limits of work will be staked out prior to construction and wetlands and buffer construction limits will be protected with erosion control measures including compost socks or similar erosion control methods and construction fencing to limit impacts beyond the impact areas.

iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

Disturbance is not proposed in habitat used by salmonids for rearing, spawning, or by any species of local importance. The part of the wetland proposed to be impacted is degraded and does not support habitat for the above-described species. The area of the site where impacts are occurring is outside of the 100-year floodplain and surface hydrology is not contiguous between the impacted wetland and Kelsey Creek.

iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;

Impacts were minimized by the proposed location at the edge of the wetland adjacent to existing disturbance. This crossing is perpendicular and situated to avoid bisecting and dividing the wetland. The 10-foot width of the driveway is the minimum required by the City. The applicant has reduced the lots into one lot to minimize wetland impacts, thereby reducing the driveway from 20 feet to 10 feet.

v. All work shall be consistent with applicable City of Bellevue codes and standards;

All work will be consistent with applicable City of Bellevue codes and standards.

vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

Impacts are occurring at the outer edge of the wetland in an area with minimal to no ponding and is outside of the floodplain. Adverse impacts to flow, flood dynamics and hydroperiods are not anticipated. The wetland where fill is proposed does not have a surface water connection to Wetland A or Kelsey Creek.

vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

No parking, mechanical equipment, maintenance sheds or similar uses are proposed in the wetland or buffer.

viii. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

A mitigation plan meeting the requirements of LUC20.25H.210 is included.

3.4 Structure Setback Modification

The project is proposing to modify the 20' and 15' wetland structure setback, as detailed in Table 4 and shown on **Figure 5**. LUC 20.25H.095(E)4, allows for structure setback modification to be waived or modified if the following code requirements, a-d, can be demonstrated.

a. Water quality, or slope stability as documented in a geotechnical report, will not be adversely affected;

As noted by the project geologist, (Cobalt Geosciences, 2021), water quality and slope stability are not expected to be adversely affected.

b. Encroachment into the structure setback will not disturb habitat of a species of local importance within a critical area or critical area buffer;

The proposed driveway is in the setback, as it is necessary to cross the setback to access the building location. This is occurring adjacent to the backyards of an existing subdivision, in a location that is not expected cause habitat disruptions. The small area of the proposed home extends less than three feet into the setback, in an area of existing disturbance and adjacent to a degraded area proposed for enhancement. The sport court is proposed adjacent to a densely forested buffer as well, which will provide screening for the proposed development. There are no known species of local importance that use the wetland buffer. Several species of fish use Kelsey Creek, located within Wetland A, although the main stream channel is located at least 300 feet from the proposed house. Fish are expected to use Wetland A during high water events although no project activities are occurring within 110 feet of the wetland with the exception of vegetation enhancement. The projects design and mitigation measures will prevent degradation to water quality and hydrology impacts, to protect these species. Construction of the sport court must be done outside the rainy season and construction fencing and erosion control measures must be in place to prevent erosion into the buffer.

c. Vegetation in the critical area and critical area buffer will not be disturbed by construction, development, or maintenance activities and will be maintained in a healthy condition for the anticipated life of the development; and

The purpose of the wetland structure setback is to protect the wetland and buffer during construction to prevent damage to buffer vegetation, as well as long-term, to allow for

maintenance and circulation around the proposed home to prevent long term buffer impacts. The greatest potential risk to vegetation is due to grading of the sport court in the wetland setback near the edge of the wetland buffer. Two trees (#3 and #4) are present in this area. However, due to their fair condition and proximity to the proposed home, these trees are proposed for removal, per recommendations of the consulting arborist (Layton 2021). These trees will be replaced with long lived evergreen trees in the enhanced buffers (see mitigation plan). The buffer edge will be protected with construction fencing and erosion control measures to prevent damage to buffer vegetation during the construction process.

The small area of the building in the setback reduces the setback by less than three feet, which will still allow for building maintenance and construction without added risks.

d. Enhancement planting on the boundary between the structure setback and the critical area buffer will reduce impacts of development within the structure setback.

Enhancement plantings along the development edge are proposed as described in the mitigation section of this report. Areas of invasive vegetation will be removed, and native species will be installed to screen the development and enhance the structural and biodiversity of the buffer to reduce impacts from the project on wetland buffers.

3.5 Cumulative Impacts

Impacts on individual projects often appear minor, but cumulatively, especially in rapidly urbanizing areas, they can cause significant stressors on the environment. This project is required to mitigate project impacts and will do so through City code required provisions to manage stormwater and mitigate the functions lost due to project impacts. Likewise, negative cumulative impacts, such as those that could occur from other wetland impacts in the area to hydrology, water quality and wildlife habitat are not expected, as these will be required to be mitigated to the maximum extent practical.

At the watershed scale, cumulative impacts cannot be rectified by "enhancement only" restoration actions on a project, as this leads to an overall "net-loss" of wetland area and function and is in conflict with Washington State's policy of "no net-loss" of wetland area. The use of the Keller Farm Mitigation Bank for the project, which is primarily "wetland re-establishment" alleviates the problem of cumulative "net losses" of wetland area in the watershed. Additionally the KFMB is highly regulated and subject to interagency oversight throughout the approval and long-term monitoring processes.

3.6 Indirect Impacts

The direct impacts from wetland fill due to the driveway can also cause indirect impacts to the adjacent wetland area beyond the footprint of the wetland fill. The Department of Ecology guidance for the standard method of determining the area of indirect impacts is to start by defining this area as the width of the wetland buffer for the wetland (110 feet for Wetland B) and calculate the area of this distance from the direct project impacts. Using this method, the 110-foot buffer from the edge of the proposed driveway includes 13,500 sf of area. However, the DOE guidance also acknowledges that site specific scenarios may deviate from this guidance when determining compensation, specifically for wetlands that currently do not have an intact buffer. The wetland in the area of impact is adjacent to a subdivision's

backyards, which are between 0 and ten feet from the wetland edge, with an average functional buffer of five feet. This zone is vegetated with a mix of plants including invasive Armenian blackberry and reed canarygrass as well as native species including on Douglas fir (determined to be in declining health by the project arborist) and willows. There is an additional 29 feet of maintained yard (mowed lawn with regular dog usage) to the existing patio or driveway of the adjacent house. The east side of this wetland also borders 128th Avenue SE, which is between 25 and 39 feet from the delineated wetland edge. Due to the existing degraded buffer conditions, the indirect impact area has been identified as extending 34 feet from the proposed driveway and was based on the distance to the adjacent houses. This indirect impact area totals 4,450 sf. Based on the Ecology guidance, applying a buffer width for determining indirect wetland impact compensation greater than what currently exists is not the intent.

The Department of Ecology lists several potential indirect impacts (DOE, 2021) that may occur to wetlands depending on the type and location of the impact and the physical characteristics of the wetland and surrounding area. These potential indirect impacts listed in the Department of Ecology's Wetland Mitigation in Washington, Part 1, are addressed below with the project's expected indirect impacts listed below in italics.

a. Removing Vegetation adjacent or in the wetland, allowing noise and light pollution, and sedimentation.
The project is proposing removing vegetation in an approximately 15-foot wide strip in the vicinity of the proposed driveway. Vegetation in the adjacent wetland is predominantly reed canarygrass and non-native blackberry shrubs in the buffer, as well as willow and a Douglas fir tree in poor health. The reed canarygrass does not provide noise and light pollution screening. The approximately five foot portion of the buffer that has woody vegetation provides some screening, and the remaining lawn provides no screening, and is a source of noise and likely water quality contaminants from lawn products and/or pet waste. The reed canarygrass in the wetland, while it is invasive, does have an extensive root system that provides for erosion control and sedimentation functions.

Mitigation of these on-site functions are addressed through on-site enhancement in the Mitigation section of the report, which will result in a densely planted wetland and buffer edge to prevent adverse impacts. With enhancement of the adjacent wetland and buffers, the ability to provide noise and light pollution screening will improve. Runoff from the proposed driveway will be controlled to mitigate for potential erosion and sedimentation impacts through temporary erosion and sedimentation measures during construction and stormwater measures in the project design, which have not yet been finalized.

b. Filling the majority of a wetland, thereby leaving the remaining wetland unable to perform wetland functions, or lose a source of hydrology.
Not applicable. This project is filling less than 1,000 sf of the edge of Wetland B and is not expected to impact the remaining wetlands functions or hydrology. Impacts are proposed on the outer edge immediately adjacent to a subdivision and not in an area of a hydrologic source. Stormwater measures will be expanded and addressed as the project progresses.

c. Fragmentation of a wetland caused by bisecting the wetland.

Due to the location of the proposed fill on the outer edge of the wetland there will be no fragmentation of the wetland. The far side of the wetland fill are the backyards of a residential subdivision.

d. Changing the surrounding land use and topography which could divert surface or groundwater or introduce stormwater.
The project will result in one additional single family residence adjacent to an existing subdivision. This is not a major land use change that is expected to adversely impact surface or groundwater, as the proposed house will adhere to stormwater requirements. The new driveway will cause direct impacts previously described and mitigated for in this report.

e. Creating structures or land uses that could impact wildlife crossings between wetland areas.
As noted previously the project activities are located immediately adjacent to the backyards of a subdivision and are not expected to alter or hinder wildlife passage. Through removal of dense blackberries in the buffer area and planting with native species, wildlife passage through buffer areas should be enhanced as a result of project activities. The wetland area to be filled is not part of a corridor that connects to any other habitat areas that would support wildlife travel between habitat patches.

f. Creating new activities outside the wetland that could impact wetland functions.
The resulting single family residence adjacent to the existing subdivision is 110 feet from the wetland and located outside the buffer and activities in this area are not expected to result in indirect impacts.

Confirm the assessment included Bellevue species of local importance (LUC 20.25H.150) in addition to WDFW PHS.

3.7 Habitat Assessment

A habitat assessment that meets the requirements of LUH 20.25H.165 is provided below and addresses on-site vegetation, sensitive species nearby, and potential impacts and mitigation measures and how these will affect habitat.

Vegetation in the western third of the site is forested with native trees, shrubs, and groundcovers, as described in Section 2.1. The southern edge of the property that includes Wetland A is predominantly vegetated with native vegetation. However, the remainder of the uplands on this site are densely vegetated with extensive areas of invasive Armenian blackberry and Wetland B adjacent to 128th Avenue NE is dominated by invasive reed canarygrass.

The Washington Department of Fish and Wildlife Priority Habitats and Species (PHS) database was searched for the site and surrounding vicinity. The PHS database lists the following salmonids as utilizing Kelsey Creek: sockeye salmon (*Oncorhynchus nerka*), coho salmon (*Oncorhynchus kisutch*), fall Chinook salmon (*Oncorhynchus tshawytscha*), resident coastal cutthroat trout (*Oncorhynchus clarkii*), and winter steelhead (*Oncorhynchus mykiss*). Kelsey Creek is listed as a biodiversity corridor and the wetlands are listed as priority habitats. The project is not proposing any impacts to Kelsey Creek or its buffer, although the site does provide adjacent terrestrial and seasonal wetland habitat that contributes to the wildlife value, and water quality and hydrologic functions that support the adjacent Kelsey Creek system. Construction is located as far to edge of the depicted biodiversity corridor as site conditions permit.

As described in more detail in the functional value assessment (**Section 6.0**), the project is expected to positively impact on-site wetland habitat, after mitigation measures that would provide some benefit to

these species are implemented. Portions of the on-site wetland and buffers are degraded and replacing invasive plants with native plants will increase the ability wetland and buffer to provide structural and biological diversity and habitat value. Because of adherence to stormwater management requirements, the project is not expected to diminish the site's ability to attenuate stream flows. No impact to stream bank stability is anticipated. Federal and State management recommendations for species relevant to this project include the enhancement of the riparian buffer to prevent erosion, enhance water quality and manage the water flow. The project proposes to implement enhancement of the on-site wetland and buffers to meet these recommendations, which are presented in the mitigation plan as removing invasive plants and installing native species in the wetland and buffer areas. On a watershed scale, the restoration actions proposed using on-site mitigation and the Keller Farm Mitigation Bank are expected to have a significant functional lift to fish habitat in the watershed.

Direct impacts include constructing a driveway through a small area of Wetland B and its buffer (see Table 4). This project does not propose any direct stream impacts and no indirect impacts to streams are expected. Indirect impacts as a result of implementation of the mitigation plan are expected to be beneficial, as noted in the functional value assessment (**Section 6.0**). As vegetation on the site matures, it will contribute to a diversity of insects that may support fish in the off-site stream and support species dependent upon the biological interface of aquatic and riparian systems. Armenian blackberry is abundant on this project site. This species is known for having shallow roots that are not effective and binding soil and have little value in preventing erosion. Removal and replacement with fibrous-rooted native species will provide long-term soil stability and erosion control on the site.

Avoidance, minimization and mitigation measures are summarized In **Section 3.2**, Environmental Sequencing. The mitigation plan in **Section 4.0** discusses mitigation plan details and the Bank Use plan in **Section 5.0** discusses wetland mitigation details. Site impacts are proposed to occur in areas of degraded vegetation and adjacent to an existing subdivision to the north, while avoiding wetlands, streams, and their buffers to the extent possible. Due to the inability to access the unconstrained portion of the site, impacts were unavoidable and are proposed. Mitigation sequencing was conducted to determine the most appropriate mitigation measures. A combination of on-site restoration of degraded wetlands and buffers and use of an off-site mitigation bank is proposed to provide both on-site enhancement and high-quality wetland mitigation in a valuable off-site location.

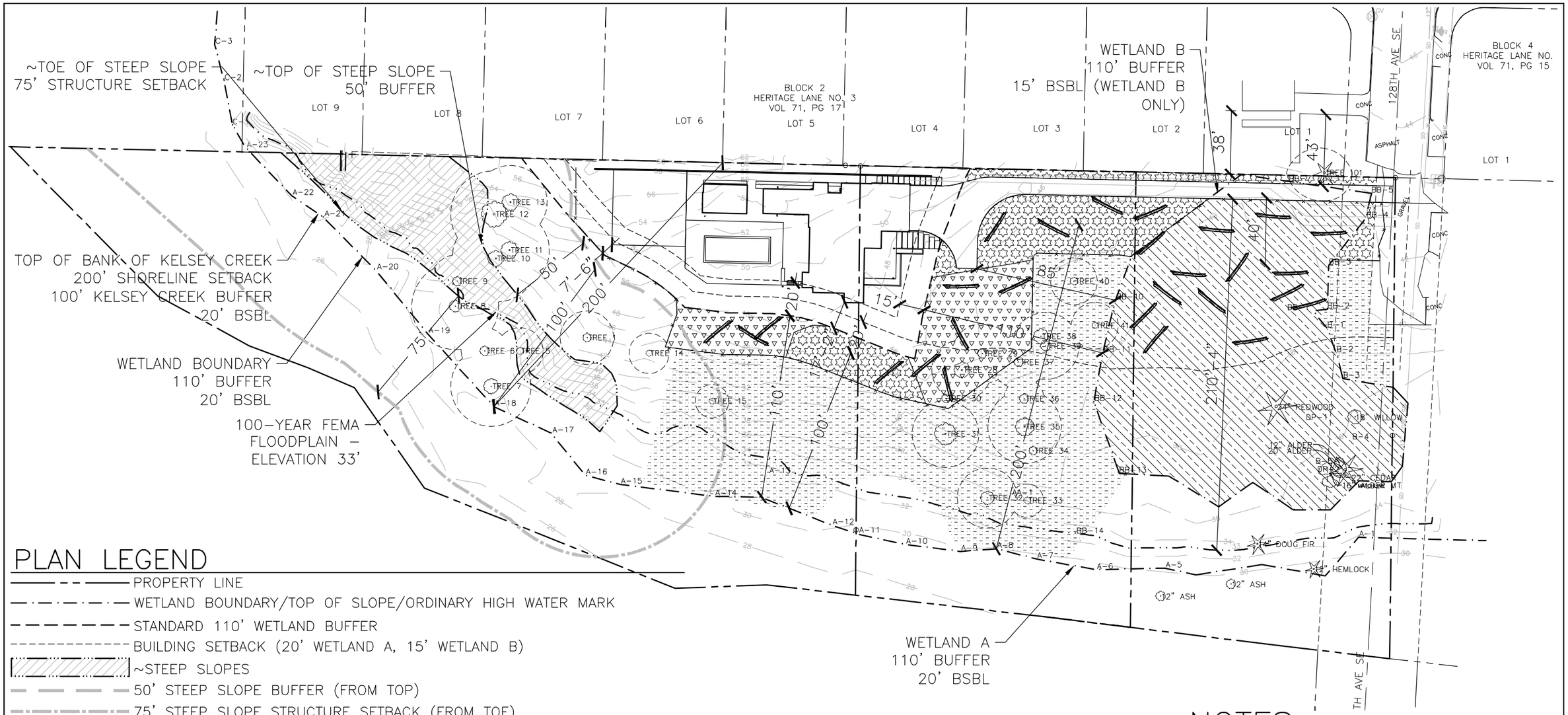
The Project has planned for ongoing management to protect the enhanced wetland, streams, and buffers. Included is a proposed 5-year monitoring plan (**Section 8**), as well provisions for Vegetation Management and Contingency Measures (**Section 9**).

4.0 ON-SITE MITIGATION

Impacts are proposed to be mitigated through a combination of on-site and off-site mitigation (banking) measures. On-site, wetland and buffer enhancement measures will include the removal of invasive species, planting of native trees, shrubs, and groundcover plants. The impacts over time will be mitigated through these actions as well as a five-year maintenance and monitoring period for on-site enhancement treatments.

Buffer

The project site has adequate opportunities and area to mitigate for wetland buffer impacts. LUC 20.25H.105(C)(3) requires that buffer areas be mitigated at a 1:1 ratio. The project is proposing a mitigation ratio of 13:1 to mitigate for impacts to the buffer and structure setback. The project is providing a native, vegetated buffer adjacent to all developed areas for increased screening of the



PLAN LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY/TOP OF SLOPE/ORDINARY HIGH WATER MARK
- STANDARD 110' WETLAND BUFFER
- BUILDING SETBACK (20' WETLAND A, 15' WETLAND B)
- ~STEEP SLOPES
- 50' STEEP SLOPE BUFFER (FROM TOP)
- 75' STEEP SLOPE STRUCTURE SETBACK (FROM TOE)
- 100-YEAR FEMA FLOODPLAIN (APPROXIMATE BASED ON 33' FEMA ELEVATION
- CONSTRUCTION FENCING AND EROSION CONTROL
- LARGE WOODY DEBRIS

MITIGATION LEGEND

- WETLAND ENHANCEMENT - 25,153 SF (0.58 ACRES)
- BUFFER ENHANCEMENT WITH BLACKBERRY REMOVAL AND PLANTING WITH TREES, SHRUBS AND GROUNDCOVER - 7,915 SF (0.18 ACRES)
- BUFFER ENHANCEMENT WITH BLACKBERRY REMOVAL AND PLANTING WITH SHRUBS IN AREA OF EXISTING NATIVE FERNS AND TREES - 6,488 SF (0.15 ACRES)
- BLACKBERRY/INVASIVE PLANT REMOVAL - 28,167 SF (0.65 ACRES)

TOTAL MITIGATION - 67,723 SF (1.56 ACRES)

SCALE
0 30 60
(FEET)
1 INCH = 60 FT

N

NOTES

1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

AQUATICA
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PROPOSED MITIGATION
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	
21-368	
FIGURE 6 OF 10	

21-368-07-06-22-JARPA.DWG

development. This is occurring as a combination of dense planting of invasive dominated areas adjacent to the development (14,403 sf) as well as removal of invasives in areas where there are existing native plants (28,167 sf). The project is proposing buffer mitigation that greatly exceeds City requirements.

LUC 20.25H105(C) and (D) requires that wetland acreage be replaced at a 2:1 replacement to impact ratio for Category III wetlands if the replacement is on-site and in-kind. Alternatively, City code allows for the possibility of wetland enhancement as mitigation, although mitigation ratios are not provided in the City code. State guidance for wetland enhancement for Category III wetland impacts is 8:1 enhancement to impact ratio (DOE, 2021). The project is proposing to enhance all of the remainder of Wetland B to mitigation for wetland fill to satisfy the Bellevue LUC, at an enhancement to loss ratio of 27:1, more than three times the recommended state guidance. About half of this area is "full enhancement" of degraded wetland, which means enhancing areas nearly completely dominated by invasive plants. The other half is partial enhancement, which means removing invasive plants that are interspersed with native species and adding trees or understory plantings where they are lacking. Additional mitigation for wetland fill to satisfy state and federal agencies is proposed off-site and described in the Off-Site Mitigation and Bank Use Section of this report.

4.1 Indirect Impact Compensation

State and Federal agencies require indirect impact compensation. This is not a City requirement. The on-site wetland enhancement is proposed to also satisfy state and federal requirements for indirect wetland impacts (State and Federal direct wetland impacts to be mitigated for off-site). The wetland adjacent to the direct impact (driveway) area is primarily vegetated with invasive species. Most of Wetland B adjacent and south of the proposed driveway is dominated by reed canarygrass and is relatively flat. The remainder has a mix of native vegetation mixed is invasive blackberry. This project proposes to enhance all of the wetland that is degraded. The DOE (2021) provides a general recommendation of requiring half the mitigation ratio for indirect impacts, however also acknowledges that mitigation requirements can vary depending on the width of the existing buffer, and physical characteristics of the wetland including slope and vegetation. This guidance for indirect impact compensation is thus, not strictly prescriptive but allows for variation in mitigation proposals based on the physical characteristics of the wetland and existing buffers. This guidance includes the example of an impacted wetland without an existing buffer that therefor does not require indirect impact mitigation. This wetland has a functional vegetated buffer of 0-10 feet (an average of five feet) with an additional 29 feet a backyard lawn. Due to degraded existing buffer conditions in this area, the remaining adjacent wetland is proposed as mitigation at a 5.6:1 (enhancement to indirect impact) ratio. This exceeds the DOE's prescriptive 50% indirect impact ratio (4:1) but determined based on existing degraded wetland and buffer conditions and the ability of proposed mitigation on-site enhancement measures to compensate for the expected impacts. Using the DOE prescriptive indirect impact ratios would result in the project mitigating for the indirect impacts at about four times the rate required for the direct impacts. Given site conditions and the relatively small amount of direct impacts, this does not seem appropriate for this project. With mitigation measures, the overall project is expected to improve the buffer and wetland functions on the property.

On-site Mitigation treatments are described in the table below. Off-site mitigation measures are described in **Section 9.0**.

Table 5. On-Site Mitigation Summary

	Impacts	Enhancement	Enhancement Mitigation Ratio*
Wetland Fill	927 sf 0.02 ac	25,153 sf** 0.58 ac	27:1
Indirect Wetland	4,450 sf 0.10 ac		5.6:1
Wetland Buffer	3,256 sf 0.07 ac	42,570 sf 0.98 ac	13:1

*Enhancement to Impact Ratio
**The enhanced wetland coincides with the indirectly impacted wetland. The area of the indirectly impacted wetland is proposed for enhancement.
***The modified critical area is the on-site critical areas less the wetland fill and buffer impacted for the driveway.

4.2 Invasive Plant Removal

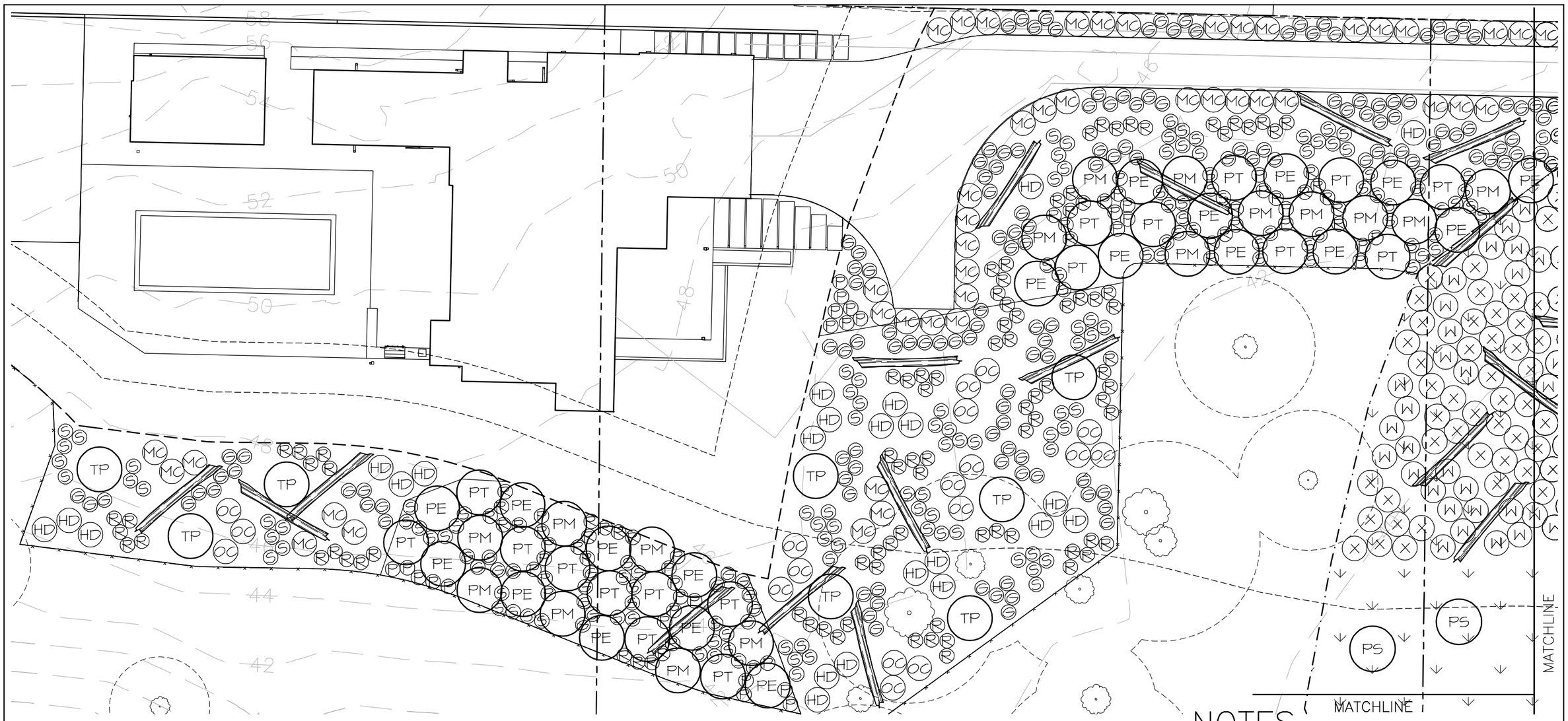
Armenian blackberry is present throughout most of the eastern two-thirds of on-site buffer areas. In designated enhancement areas, these will be cut down, and the roots grubbed out. All parts of the plants shall be removed and disposed of off-site. Areas that have no desirable groundcover species shall be covered in cardboard after invasive plant removal and sheet mulched with 4 inches of coarse wood chips such as arborist chips. In areas with desirable groundcovers present (primarily sword ferns) these species shall be preserved, and the area mulched with wood chips. Cardboard sheet mulching shall not be used in areas with existing ferns. These treatment areas are shown on **Figure 6.**

4.3 Planting Enhancement

The plant species depicted on the mitigation plan (**Figures 7-9**) were chosen for a variety of qualities, including adaptation to specific water regimes, value to wildlife, value as a physical or visual barrier, pattern of growth (structural diversity), ability to provide erosion control, and aesthetic values. Plant materials may consist of a combination of bare-root shrubs (during the dormant season) and container plants. Plants shall not be installed during the dry summer months (generally July through September).

Evergreens such as salal and Pacific wax myrtle are proposed to be planted in the buffer areas along the parking and driveway to screen lights and human activity from the driveway and area surrounding the house. These species are also drought tolerant and grow well in buffer environments. Bitter cherry, osoberry, thimbleberry (*Rubus parviflorus*), and snowberry provide food for wildlife through fruit production. Many of these species, especially snowberry and sword fern develop dense, fibrous root systems that are excellent at providing erosion control.

In the wetland, species adapted to a high-water table are proposed, including Sitka spruce and two species of willow, Sitka willow and Pacific willow (*Salix lasiandra*). Sitka spruce is evergreen and will provide screening adjacent to the driveway. The two species of willow will provide for the development of both a shrub (Sitka) and tree (Pacific) layer in the wetland. The on-site portion of the wetland is presently dominated by reed canarygrass, which is an invasive species. This mitigation project is not proposing complete removal, but rather is proposing planting with a fast growing and aggressive native species (willows) with the goal of establishing a shrub and tree layer in the wetland to increase the



PLANT LIST (SEE FIGURE 9 FOR SCHEDULE)

TREES

KEY	COMMON NAME
PS	SITKA SPRUCE
PT	QUAKING ASPEN
PE	BITTERCHERRY
PM	DOUGLAS FIR
W	PACIFIC WILLOW
TP	WESTERN RED CEDAR

SHRUBS

KEY	COMMON NAME
HD	OCEAN SPRAY
L	BLACK TWIN-BERRY
MC	PACIFIC WAX MYRTLE
OC	INDIAN PLUM
PC	PACIFIC NINEBARK
R	THIMBLEBERRY
C	SCOULER WILLOW
X	SITKA WILLOW
S	SNOWBERRY

GROUNDCOVER

KEY	COMMON NAME
G	SALAL
P	SWORD FERN

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

1. SURVEY PROVIDED BY PLOG ENGINEERING, P.O. BOX 412, RAVENDALE, WA 98051, (206) 420-7130. SITE PLAN PROVIDED BY MEDICI ARCHITECTS, 11711 SE 8TH STREET, SUITE 100, BELLEVUE, WA 98005, (425) 453-9298.
2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

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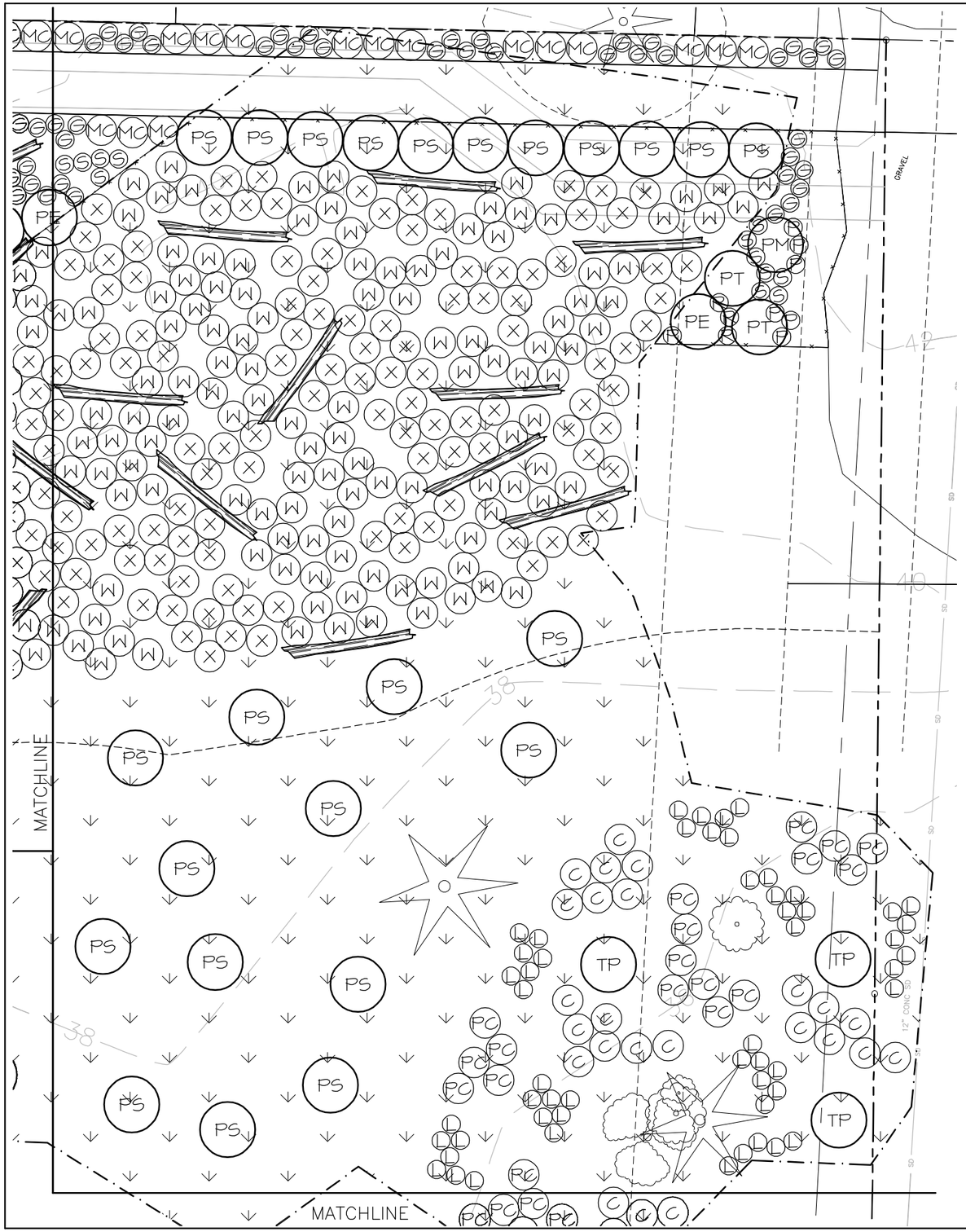
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 308
DUVALL, WA 98019
T 425.802.8988

PLANTING PLAN
OLTEANU PROPERTY
807 128TH AVE. SE
BELLEVUE, WASHINGTON
PARCELS 0424059110, -9111, -9112

DRAWN BY	CHECKED BY
KG	TO
SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21-368
FIGURE 7 OF 10	

21-368-07-06-22-JARPA.DWG



PLANT LIST (SEE FIGURE 9 FOR SCHEDULE)

TREES

KEY	SCIENTIFIC NAME	COMMON NAME
PS	PICEA SITCHENSIS	SITKA SPRUCE
PT	POPULUS TREMULOIDES	QUAKING ASPEN
PE	PRUNUS EMARGINATA	BITTERCHERRY
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR
W	SALIX LASIANDRA	PACIFIC WILLOW
TP	THUJA PLICATA	WESTERN RED CEDAR

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK
R	RUBUS PARVIFLORUS	THIMBLEBERRY
C	SALIX SCOULERIANA	SCOULER WILLOW
X	SALIX SITCHENSIS	SITKA WILLOW
S	SYMPHORICARPOS ALBUS	SNOWBERRY

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME
G	GAULTHERIA SHALLON	SALAL
P	POLYSTICHUM MUNITUM	SWORD FERN

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

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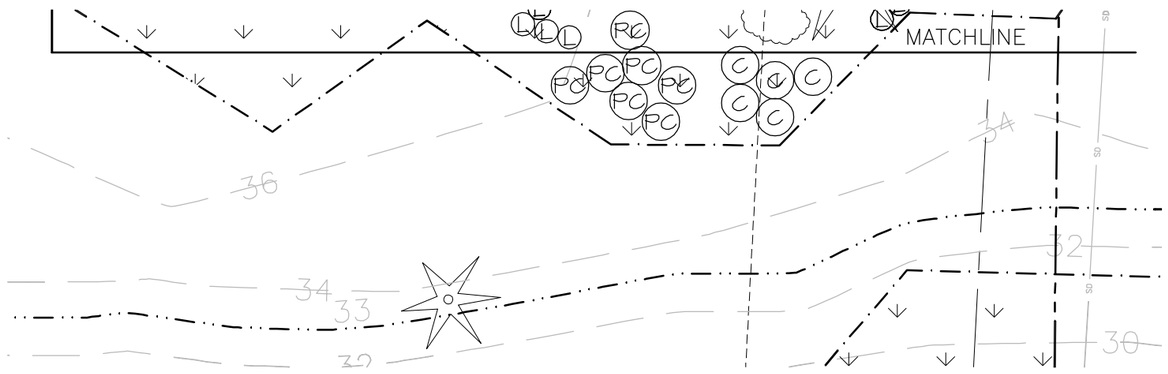
21-368	
FIGURE 8 OF 10	

21-368-07-06-22-JARPA.DWG



PLANT SCHEDULE

TREES

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
PS	PICEA SITCHENSIS	SITKA SPRUCE	5 GAL.	AS SHOWN	28
PT	POPULUS TREMULOIDES	QUAKING ASPEN	2 GAL.	AS SHOWN	19
PE	PRUNUS EMARGINATA	BITTERCHERRY	2 GAL.	AS SHOWN	20
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	2 GAL.	AS SHOWN	17
W	SALIX LASIANDRA	PACIFIC WILLOW	2 GAL.	5' O.C.	149
TP	THUJA PLICATA	WESTERN RED CEDAR	5 GAL.	AS SHOWN	11

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	1 GAL.	5' O.C.	23
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	1 GAL.	3' O.C.	54
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	1 GAL.	5' O.C.	60
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GAL.	5' O.C.	18
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL.	5' O.C.	24
R	RUBUS PARVIFLORUS	THIMBLEBERRY	1 GAL.	3' O.C.	122
C	SALIX SCOULERIANA	SCOULER WILLOW	2 GAL.	5' O.C.	26
X	SALIX SITCHENSIS	SITKA WILLOW	2 GAL.	5' O.C.	151
S	SYMPHORICARPOS ALBUS	SNOWBERRY	1 GAL.	3' O.C.	152

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE (MIN.)	SPACING	QUANTITY
G	GAULTHERIA SHALLON	SALAL	1 GAL.	3' O.C.	198
P	POLYSTICHUM MUNITUM	SWORD FERN	1 GAL.	3' O.C.	54

SCALE
0 10 20
(FEET)
1 INCH = 20 FT

N

NOTES

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2. FLAGS C1-C8 AND A2-A4 ESTABLISHED VIA GPS POINTS (NOT SURVEYED).

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SCALE	DATE
AS NOTED	07.06.22
PROJECT NO.	21-368
FIGURE 9 OF 10	

21-368-07-06-22-JARPA.DWG

SPECIFICATIONS

CONSTRUCTION/SPECIFICATIONS

- Prior to construction, the limits of work will be clearly staked at 20–foot intervals and all temporary erosion and sedimentation controls in place.
- Hazard trees proposed to be removed in the buffers shall be transformed into snags at a height less than their distance to new infrastructure to prevent future hazards. Removed trees on–site shall be preserved as needed to provide large woody debris as noted in the buffer.
- Sheet mulch all buffer areas to be planted. Do not sheet mulch native ferns. Do not sheet mulch wetland areas. Mulch shall be a minimum of 4" of coarse wood chips such as arborist chips.
- Species substitution shall not be made without approval of wetland biologist.
- Plants shall be locally grown (western Washington or Oregon), of normal health, vigorous, and free of weeds, diseases, insects, insect eggs and larvae.
- Container grown plants shall not be loose in container and shall not be pot–bound.
- B&B plant material shall not have cracked or mushroomed root balls. Root balls shall be firm, natural balls of earth of sufficient size to encompass the fibrous and feeding rooting system necessary for establishment and health of plant.
- Do not prune plants prior to delivery or planting.
- Take all precautions and customary good trade practices in preparing plants for transport. Cover plants transported on open vehicles with a protective covering to prevent wind burn.
- Protect plants from drying out. Bare root and B&B plant material shall have their roots kept moist at all times. Protect from freezing, wind, and sun. If planting is delayed by more than 24 hours, cover roots/root balls with sawdust, compost, or soil. Water plants as necessary.
- Water plants within 24 hours of planting.
- All receipts for labor and materials shall be retained for submittal to the County if requested.
- The bond holder shall replace any plants that die within the first year following approval of installation.

SHRUB AND TREE SOURCES

STORM LAKE GROWERS
MONROE, WA
(360) 794–4842

TADPOLE HAVEN NATIVE PLANTS
WOODINVILLE, WA
(425) 788–6100

OXBOW FARMS
CARNATION, WA
(425) 788–1134
EXT. 4

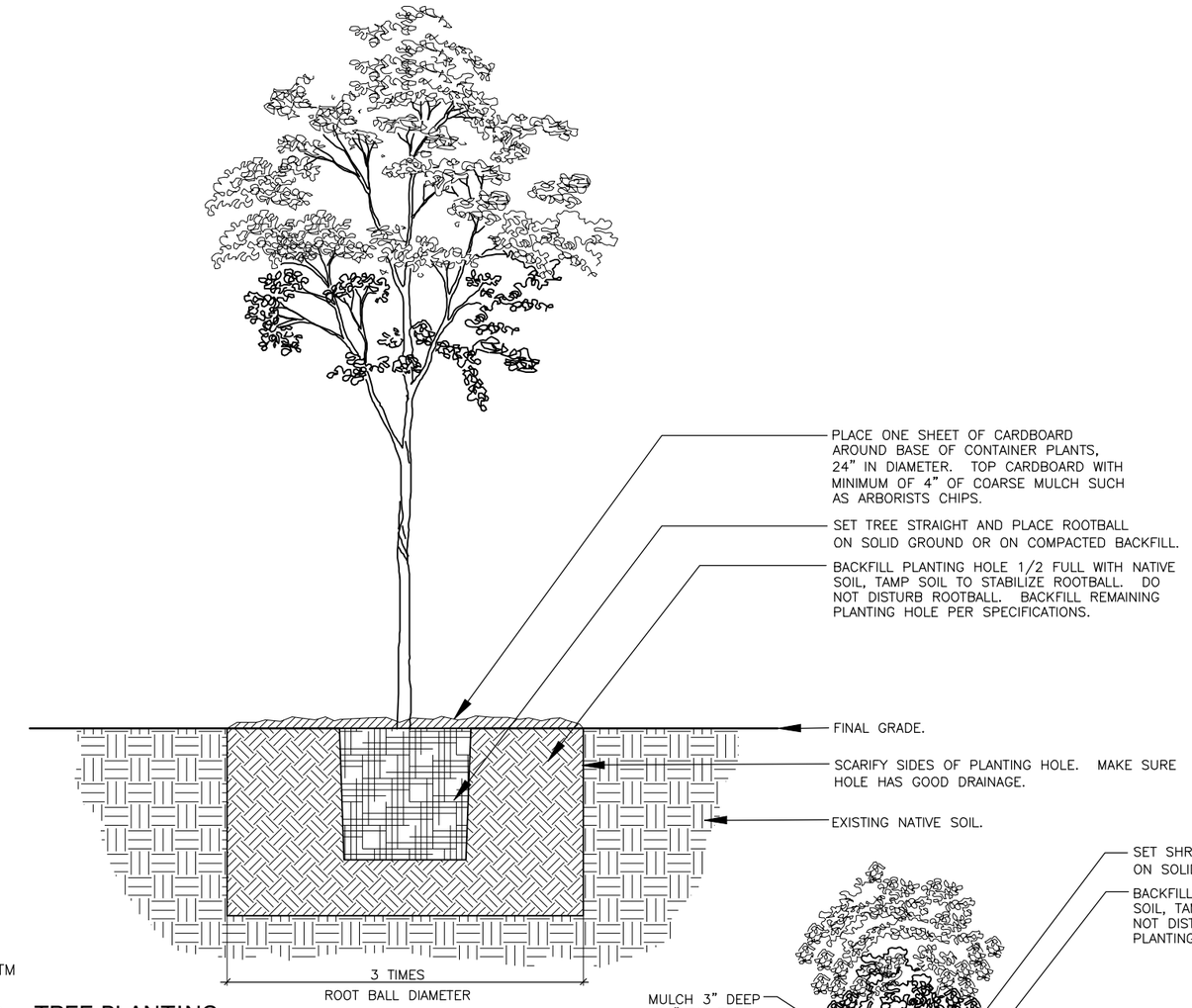
KING COUNTY CONSERVATION DISTRICT
HTTP://KINGCD.ORG/PROGRAMS–NATIVE–WALK–UP–SALE.HTM

SEED SOURCES:

PLANTAS NATIVA
BELLINGHAM, WA
(360) 715–9655

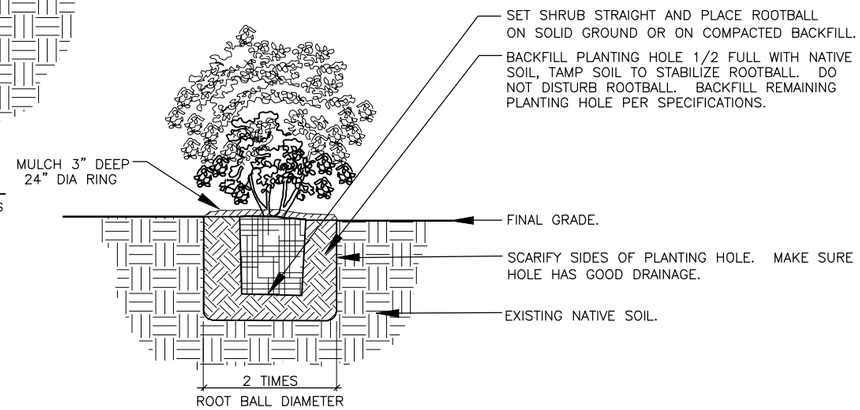
INSIDE PASSAGE SEEDS
PORT TOWNSEND, WA
(360) 385–6114

FROSTY HOLLOW ECOLOGICAL RESTORATION
LANGLY, WA
(360) 579–2332



1 TREE PLANTING

Scale: NTS



2 SHRUB PLANTING

Scale: NTS

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DETAILS AND SPECIFICATIONS
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PROJECT NO.	21–368
FIGURE	10 OF 10

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structural and biological diversity of the wetland and reduce reed canarygrass cover over time. Complete removal is not proposed for two primary reasons. First, reed canarygrass is known for providing excellent erosion control through its dense root system. The proximity of this wetland to Kelsey Creek makes this an important function. Willows will also provide this erosion control function, but the change can be done gradually without a period where there is no vegetation in an aquatic environment. Willows have been shown as an effective long-term strategy to reduce reed canarygrass coverage (Kim et. al. 2006). The second reason is that removal of this species brings about additional environmental impacts that do not outweigh the benefit of complete removal. It is very difficult to remove this plant without the use of extensive herbicides and with the proximity to Kelsey Creek and numerous salmonid species this risk is not worth the potential harm, either the known or suspected impacts that herbicides can have on aquatic environments. Reed canary grass can also be removed through altering the hydrologic regime through creating a wetter system that the grass cannot tolerate. This is not a possibility on this site due to the seasonal and marginal hydrology of this area and lack of any other water source.

4.4 Habitat Features

Large woody debris salvaged from the upland portions of the property are proposed to be placed to be placed in the restored portions of the buffer. This will provide habitat for amphibians and small mammals to shelter beneath and will also aid in improving soil quality long term as they decay.

4.5 Irrigation

The installed plantings must be watered if needed for at least the first year after planting and shall remain in place during the monitoring period. While native plants are drought tolerant, supplemental water is often needed for the first year to ensure adequate plant establishment. Plants should receive 1" of water once per week – either through irrigation, natural rainfall, or a combination of both. Irrigation must be continued during subsequent years of the monitoring period if 1) the plants appear stressed from drought, 2) the summer is unusually hot and dry, or 3) a significant number of plants die and require replacing. The plants may be watered by hand due to the proximity to the proposed home or a temporary irrigation system may be installed. Both the wetland and upland areas shall be irrigated as needed due to the seasonal nature of wetland hydrology in this part of the wetland.

4.6 Goal, Objectives, and Performance Standards

The following goal, objectives, and performance standards have been created to evaluate the success of the project.

Goal 1:

Mitigate for buffer impacts by restoring the buffer areas shown and quantified on **Figure 6**. The project will be evaluated through the following objectives and performance standards.

Objective A: Increase and restore the woody species diversity in the buffer area to improve the structural and biologic diversity and overall habitat value of the buffer.

Performance Standard A: All plants that die by the end of Year 1 will be replaced. Percent survival of planted woody species must be at least 85% for remaining years of the monitoring period.

Objective B: Increase and replace cover of native groundcovers shrubs and trees.
Performance Standard B: Coverage of planted or volunteer desirable species must be at least 70% areal coverage by the end of the 5-year monitoring period in areas without an existing woody canopy. Success in areas with an existing tree canopy will be determined through Objective A alone.

Objective C: Remove and control invasive plant species with the goal of reducing invasive cover to less than 10% in the enhanced buffer areas.
Performance Standard C: After construction and following every monitoring event for a period of five years, exotic and invasive plant species will be maintained at levels below 10% total cover in the mitigation area. Species requiring control include those on the King County Noxious Weed List.

Goal 2:
Provide on-site wetland mitigation by enhancing the degraded wetland areas shown on **Figure 6.** The project will be evaluated through the following objectives and performance standards.
Objective D: Establish a scrub shrub layer of native shrub and tree species in the enhanced wetland.
Performance Standard D: Coverage of planted or volunteer desirable species must be at least 80% areal coverage by the end of the 5-year monitoring period. Note: Tree species may not form an actual tree layer (over 3 meters) within the monitoring period, although all planted species must be represented in the scrub shrub layer.

Objective E: Reduce reed canarygrass coverage in the enhanced wetland.
*Performance Standard E: Following every monitoring event for years three through five, the site shall demonstrate a reduction of reed canarygrass coverage, through measuring aerial cover, compared to conditions following construction. In these areas, success will be determined based on reduced cover of reed canarygrass but not elimination (and establishment of a dense shrub layer as noted in **Objective D**).*

5.0 CONSTRUCTION SPECIFICATIONS

- Prior to weed removal or planting activities, erosion control measures must be installed near the outer edge of the mitigation areas using compost socks or straw wattles.
- Prior to planting, remove Armenian blackberry, and other noxious weeds (per King County Noxious Weed List) in areas to be planted.
- Exact planting locations subject to modification by Biologist during installation.
- Species substitution shall not be made without approval of biologist.
- Plants shall be locally grown (western Washington or Oregon), of normal health, vigorous, and free of weeds, diseases, insects, insect eggs and larvae.
- Container grown plants shall not be loose in container and shall not be pot-bound.
- B&B plant material shall not have cracked or mushroomed root balls. Root balls shall be firm, natural balls of earth of enough size to encompass the fibrous and feeding rooting system necessary for establishment and health of plant.
- Do not prune plants prior to delivery or planting.
- Take all precautions and customary good trade practices in preparing plants for transport. Cover plants transported on open vehicles with a protective covering to prevent wind burn.
- Protect plants from drying out. Bare root plant material shall always have their roots kept moist. Protect from freezing, wind, and sun. If planting is delayed, cover roots/root balls with moist sawdust, compost, or soil. Water plants as necessary.

- Thoroughly water plants within 24 hours of planting.
- All receipts for labor and materials shall be retained for submittal to the City if requested.
- Replace dead or dying plant material during or at conclusion of 1-year post-installation approval.

6.0 MONITORING PROGRAM

Performance monitoring of the mitigation areas will be conducted for a period of five years, with reports submitted to the City according to the schedule presented in **Table 6**.

Table 6: Projected Calendar for Performance Monitoring and Maintenance Events

Year	Date	Maintenance Review	Performance Monitoring	Report Due to City
1	at installation	X	X	X
	Fall Year 1	X	X	X
2	Spring Year 2	X		
	Fall Year 2	X	X	X
3	Spring Year 3	X		
	Fall Year 3	X	X	X*
4	Spring Year 4	X		
	Fall Year 4	X	X	X
5	Spring Year 5	X		
	Fall Year 5	X	X	X*

*Request approval for release of bond from the City (presumes performance criteria are met).

6.1 Reports

Each monitoring report will include a) estimates of percent vegetative cover, plant survival, and invasive species, b) evidence of wildlife usage, c) photo-documentation, d) an overall qualitative assessment of project success for the mitigation areas, and e) maintenance recommendations. The first monitoring report will serve as the baseline assessment report. If the performance criteria are met, monitoring will cease after the third year.

6.2 Wildlife

Birds, mammals, reptiles, and amphibians observed in the mitigation areas (either by direct or indirect means) will be identified and recorded during scheduled monitoring events, and at any other times observations are made. Direct observations include actual sightings, while indirect observations may include tracks, scat, nests, burrows, song, or other indicative signs.

6.3 Photo Documentation

A series of color photographs representing views of the mitigation areas will be taken during each monitoring event. Photographs will be included with the performance monitoring reports.

7.0 VEGETATION MANAGEMENT PLAN (M) and CONTINGENCY (C)

Maintenance will be performed regularly to address any conditions that could jeopardize the success of the mitigation areas. During maintenance reviews (schedule shown in **Table 8**), any maintenance items requiring attention will be identified and reported to the property owner. Maintenance items requiring attention shall be completed within 30 days of the monitoring event.

Established performance standards for the project will be compared to the monitoring results to judge the success of the mitigation project. If there is a significant problem with the mitigation achieving its performance standards, the Bondholder shall work with the City to develop a Contingency Plan. Contingency plans can include, but are not limited to additional plant installation, erosion control, modifications to hydrology, and plant substitutions of type, size, quantity, and location. Such contingency Plan shall be submitted to the City by December 31 of any year when deficiencies are discovered.

Contingency and maintenance items may include many of the items listed below and would be implemented if performance standards are not met. Maintenance and remedial action on the site will be implemented immediately upon completion of the monitoring event (unless otherwise specifically indicated below).

- During year one, replace all dead plant material. (M)
- Water all plantings at a rate of 1" of water at least every week between June 15 and September 15, or as needed during the first year after installation, and for the first year after any replacement plantings. (C & M)
- Replace dead plants with the same species or a substitute species that meets the goal and objectives of the mitigation plan, subject to the approval of the wetland biologist. (C)
- Re-plant area after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). (C)
- Weed trees and shrubs to the drip line, by hand. Do not use mechanized devices, herbicides, or pesticides. Maintain mulch rings around trees and shrubs at a depth of 3 inches. (M)
- Remove/control weedy or exotic invasive plants (e.g., ivy, reed canarygrass, Himalayan blackberry, purple loosestrife, etc.). All non-native vegetation must be removed and dumped off site. (C & M)
- Clean up trash and other debris. (M)

8.0 PERFORMANCE ASSURANCE

The City may require an assurance device in compliance with LUC 20.40.490 to assure that the enhancement plan and monitoring and future maintenance area conducted adequately. A bond quantity worksheet detailing estimated projects costs is included in **Appendix E**.

9.0 OFF-SITE MITIGATION and BANK USE PLAN

The City of Bellevue LUC does not specifically address the use of wetland mitigation banks and fee in lieu sites although includes a preference for mitigation to first restore wetlands on formerly upland sites and in the same drainage sub-basin, when possible and allows for off-site mitigation. However, City staff has been clear that they do not support use of the bank, despite the State, Federal, and Best Available Science support for use of mitigation banks. For this reason, on-site wetland enhancement has been proposed to meet City requirements and use of an off-site mitigation bank is proposed to meet State and Federal requirements of no-net loss of wetland acreage. Within the urbanized Puget Sound region, high quality opportunities for off-site mitigation are difficult to find, as is the scenario for this project. In addition to providing available on-site wetland enhancement, the project is proposing to use

the Keller Farm Mitigation Bank (KFMB), to mitigate for project wetland impacts. Wetland regulation and science has been evolving since wetlands were first regulated and City codes created to address their protection. Federal and State agencies including the Washington State DOE and the USACE now prefer the use of mitigation banks when available and require their use whenever possible. This shift has occurred as the benefits of mitigation banks has become obvious and is supported by the best available science. These sites provide a guaranteed successful mitigation, as they are not approved for use and cannot sell credits until they have been created and shown to be successful. The KFMB is sited in a high value location in the watershed for restoring wetland, stream and other aquatic habitat areas, and will be able to replace wetland area lost better than an exclusively on-site mitigation proposal. The following sections discuss KFMB Goals and Objectives, the City code requirements for mitigation, and information on bank credits, purchase and timing.

9.1 KFMB Goals and Objectives

The KFMB is located at the confluence of two regionally significant, salmon-bearing streams, Bear Creek and Evans Creek. Another smaller stream, Perrigo Creek, flows adjacent to a portion of the western Bank boundary and was rerouted and daylighted onto the bank site. The Bank design goals were developed as part of the Project Prospectus (Habitat Bank, 2015) and Basis of Design Report (Shannon and Wilson. Inc., 2018). The design goals are consistent with DOE, USACE, and U.S. Environmental Protection agency guidelines for establishing mitigation bank goals and criteria, as well as with Bear Creek Basin restoration planning efforts and WRIA-8 restoration goals as established by the WRIA-8 Salmon Recovery Council. The project site where impacts are occurring is in the WRIA-8 watershed. Wetland and habitat restoration goals on the Bank site were developed to address the limiting factors in the watershed related to the loss of wetland hydrology, the loss of wetland habitat and vegetation communities, and the alteration of topography affecting wetlands, floodplain, and stream habitat conditions. Implementation of the KFMB will result in substantial gains in aquatic ecosystem functions as compared to baseline conditions present on the site.

The site-specific goals and objectives for the KFMB include:

- Permanently protect ecosystem functions at the Bank by implementing the Bank Instrument and executing a conservation easement with permanent funding for site stewardship.
- Re-establish wetland hydrology and varying wetland hydroperiods across the site by disabling farm ditches, reconnecting Bear creek with its floodplain, and performing grading actions to re-establish wetland hydrology and riparian habitat across the Bank site.
- Create additional wetland habitat areas that support wetland-dependent organisms and anadromous fish species. Increase habitat structure and diversity on the Bank site over existing degraded conditions.
- Re-establish wetland vegetation and native plant communities across the site. Remove and control noxious and invasive plant species and reintroduce native vegetation to increase habitat complexity in the floodplain wetlands and adjacent upland areas. Plant native trees, shrubs, and herbaceous species to re-establish a mosaic of habitat communities within the Bank property.

- Improve access for aquatic organisms to floodplain wetland and aquatic areas. Enhance and create off-channel rearing and refuge habitat for salmonids within the floodplain streams and deeper backwater areas connected to Bear Creek.
- Reconnect Bear Creek to the floodplain and improve floodplain functions on the Bank site including attenuation of flood flows, reductions in peak flood flows, food web and organic material support and transport, and refuge habitat for fish and wildlife during flood events.
- Establish a connection point for the future relocation of Perrigo Creek through the adjacent parcel north of the Bank.
- Reestablish and rehabilitate stream channel habitat in the floodplain through grading and addition of large woody debris (LWD). Create pool habitat and increase channel habitat complexity.
- Increase shading and cover of streams through planting on the Bank site over existing conditions.

9.2 Secondary Service Area Use Justification

On-site options for wetland mitigation are limited to wetland enhancement. There is insufficient upland area to convert to wetland while providing adequate buffers, and no areas that could be restored to former wetland conditions. In consideration of enhancement, there is sufficient area to meet state requirements for wetland mitigation through enhancement. However, it would not result in a no-net-loss of wetland acreage. There are also no known readily available off-site mitigation options in the same subbasin that would have the same likelihood of success as utilizing the KFMB.

In addition to the ability to meet no net loss of wetland acreage that cannot be met on-site, the KFMB meets the other required considerations, including buffer conditions and proposed widths, hydrogeomorphic wetland classes, and proposed flood storage capacity and fish and wildlife impacts such as connectivity. The KFMB is protected by non-creditable buffers to protect the wetlands and streams. The restoration of fish habitat is an important component of the KFMB. It is in an exceptionally valuable location, at the confluence of Bear, Perrigo, and Evans Creeks and has restored formerly ditched streams to their floodplains to create off-channel rearing habitat and refugia for juvenile salmon and is restoring native vegetation on what was former farmland to shade and cool waters that contribute to the WRIA-8 system. These actions have restored wetland hydrology to drained farmland to create flood storage capacity, attenuate flood flows which will be of benefit to the entire watershed.

The KFMB is also adjacent to additional 70 acres of large areas of protected habitat including a City park and mitigation created by the Washington State Department of Transportation to the northeast, which provides additional buffering through connectivity of approximately 145 protected wetlands, streams, and uplands.

The KFMB addresses all of the functions that wetlands provide in a large, re-established wetland whose credits have been approved through a multi-agency review team who will provide long-term oversight to ensure that performance standards are achieved over 10 years of monitoring. The KFMB land is also protected in perpetuity by a conservation easement held and enforced by a third-party land steward and

managed in perpetuity through the establishment of an endowment fund for the project. Credits are only released for use to a bank project by the resource agencies, after performance standards are met. Additionally, restoration is done in advance, reducing or eliminating temporal loss. A financial assurance for the bank has also been established to ensure the project is completed successfully through the monitoring period. All of these attributes result in the mitigation bank proposal being the one most likely to provide equal or improved wetland functions than permittee responsible wetland creation or restoration at or near the impacted wetland. Specific functions are addressed in the Functional Value Assessment in the following section.

Mitigation at the KFMB meets watershed goals for water quality, flood conveyance, habitat and strongly justifies off-site out of sub-drainage basin mitigation. The KFMB service area includes portions of the City of Bellevue, including the project site, which is in the secondary service area (see service area maps in **Appendix C**). The approval of the bank included the involvement of an interagency team including: USACE, DOE US EPA, Washington State Fish and Wildlife and Muckleshoot Indian Tribe Fisheries Division. Through this team of stakeholders, the service area was developed and the KFMB approved because it was specifically addressed a watershed approach to provide mitigation opportunities at a high value site that would support the rationale for mitigation throughout its service area. Additional details on the site selection and service area rationale are included in the Mitigation Banking Instrument, held by the Department of Ecology. The bank use ratios factor in no net-loss objectives to ensure a positive ecological gain, of both wetland area and functions when the project is utilized.

The KFMB follows Ecology's guidance document "Selecting mitigation sites using a watershed approach". In the Lake Washington-Sammamish Watershed, there are relatively few restoration or mitigation opportunities available that provide meaningful functional lift of existing aquatic resources. There are limited mitigation opportunities when looking "on-site" versus locating mitigation in a more sustainable and effective part of the watershed.

The KFMB site has been identified as a high priority restoration site since the 1990s and was specifically identified as a potential mitigation bank site in the Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan (2005). The Bank site was identified as a "Near Term Action" important to regional salmonid habitat restoration efforts as part of the Lake Washington/Cedar/Sammamish Salmon Conservation Plan for Water Resource Inventory Area (WRIA) 8, adopted by the National Oceanic and Atmospheric Administration (NOAA) and implemented by local stakeholders to achieve Chinook salmon recovery consistent with the Endangered Species Act (Chinook Salmon Conservation Plan, 2005; ESA 16 U.S.C. S 1531). Restoration goals at KFMB address the limiting factors in the watershed related to loss of wetland habitat and riparian vegetation communities, and alterations to floodplain and stream habitat.

9.3 Bank Credits

Utilizing credits at the mitigation bank does not follow the traditional mitigation ratios used for permittee responsible mitigation, such as those specified in LUC 20.25H105. These ratios and the KFMB available credits are not comparable units. Project stakeholders and state and federal agencies have calculated how credits shall be applied to different wetland categories. These determinations were made using several considerations including the guarantee of successful wetland rehabilitation at the bank site, as wetlands have already been restored and determined to be successful. This prevents the potential for failed wetland creation, which is one of the reasons for mitigation ratios in excess of impact

area. The other consideration in determining the credit ratios is the ecological lift and value that the KFMB will provide. The rational for the credit ratios is included in KFMB Mitigation Bank Instrument (MBI) (Habitat Bank, LLC 2019). This document defines a credit as:

> "a unit of measure representing the increase in the ecological values of different habitat types on the Bank site. A credit for the KFMB represents the increase in functions and values, and areal extent of the wetland systems and riparian areas on the Bank site. This increase in functions results from the re-establishment and rehabilitation of wetlands and streams, and the enhancement of riparian uplands on the Bank site".

Table 6 below, summarizes the required ratios for bank use. This project is proposing a 1:1 credit to impact ratio for the impacted wetland on-site. This proposal generously provides for mitigation. The project is also proposing wetland enhancement at the State required mitigation ratios to compensate for wetland fill in addition to the recommended credit ratio for the KFMB. This is proposed in part to satisfy different requirements by the City's code interpretation compared to the State and Federal agencies, but also to account for the location of the impact site in the secondary service area for the KFMB.

Table 7. Required and Proposed KFMB Credits

Permanent Resource Impact	Agency Required Credit to Impact Ratio Impact Ratio (ac.)	Proposed Credit Ratio	Proposed Credits
Wetland, Category I	Case by case	0	0
Wetland, Category II	1.2 to 1	0	0
Wetland, Category III	1.0 to 1	1	0.020
Wetland, Category IV	0.85 to 1	0	0
Critical Area Buffer	0.3 to 1	0	0
Stream	Case by case	0	0

9.3.1 Confirmation of Mitigation Credit Availability

As of October 20, 2021, the KFMB has approximately 5.0234 mitigation credits available for immediate use (see **Appendix D**). Mitigation credits are provided from the bank to an applicant's project using the suggested ratios in the table below, as approved by the USACE and the Washington State DOE. For additional information on credit availability and bank use, see contacts in **Table 8**.

Table 8. Bank Contacts

For more information about the bank contact	IRT (Interagency Review Team) Contacts	
	Department of Ecology	Corps of Engineers
Habitat Bank LLC. Zach Woodward Project Manager P.O. Box 354 Kirkland, WA 98033	Kate Thompson Shorelands and Environmental Assistance Program P.O. Box 47600 Olympia, WA 98504	Suzanne L. Anderson, PhD, PWS Project Manager/Banking Lead Seattle District U.S. Army Corps of Engineers Regulatory Branch, CENWS-OD-RG

Phone: (425) 205-0279 Email: Zachary.woodward@habitatbank.com See also: www.habitatbank.com	(360) 407-6749 kate.thompson@ecy.wa.gov	Mail Address: P.O. Box 3755 Seattle, WA 98124-3755 Building Location: 4735 East Marginal Way South Seattle, WA 98134 Email: Suzanne.l.Anderson@usace.army.mil

9.3.2 Credit Purchase or Transfer Timing

Adrian and Elana Olteanu will enter into a Purchase Agreement with Keller Farm Mitigation Bank (Habitat Bank, LLC) to purchase **0.020** credits that would appropriately mitigate for the proposed project impacts. The anticipated timing of credit purchase and transfer will follow permit issuance by the agencies with jurisdiction. Purchase of credits will be completed prior to the onset of any activities affecting impacted resources. Nothing in the Purchase Agreement shall be interpreted as permitting or construed to permit any activity that otherwise requires a federal, state and/or local permit. Proof of the credit purchase and transfer will be provided in the form a notification letter to the approving agencies and to the IRT co-chairs by the Bank Sponsor. Upon service of this notification, the mitigation requirement to purchase **0.020** mitigation credits will be fully satisfied.

9.4 Functions not Mitigated at the Bank

As detailed previously, wetlands and buffers are proposed to be enhanced on-site and not exclusively at the KFMB. The substantial on-site enhancement proposed will mitigate for the buffer and wetlands ability to bind soil, slow the flow of water, and provide screening of the development while increasing the habitat value of the wetlands. These actions cannot be mitigated for solely off-site.

10.0 FUNCTIONAL VALUE ANALYSIS

Wetlands were rated utilizing the Washington State Department of Ecology Wetland Rating System for Western Washington (2014) and all forms were included in The Watershed Company Wetland Delineation Report. This rating system assigns a point value to a variety of wetland characteristics and the surrounding landscape; through these scores, wetlands are placed into one of four categories, with Category I being the highest functioning wetlands and Category IV the lowest value wetlands. The rating system evaluates three main categories of wetland function: water quality improvement, hydrologic support, and habitat. For each of these categories the potential of the site to perform the function is evaluated, as well as the landscape potential and the perceived value to society. Wetland A's functions are described below and rating scores were previously summarized in Table 1.

10.1 Water Quality Improvement Function

Site Potential

The site potential for the wetland was categorized moderate. Slope wetlands that do not detail water for prolonged periods limit the potential of the wetland to detain water. This wetland does not have seasonal ponding, which limits its ability to perform water quality functions. The longer water remains in a wetland, the greater the potential for water quality improvement through nutrient and metal uptake by vegetation, adsorption by wetland soils, and filtration. The wetland is nearly entirely vegetated, which enables nutrient uptake and filtration by vegetation.

Landscape Potential
The landscape site potential for the site to perform water quality improvement functions scored moderate, due to the input of stormwater from developed surfaces into the wetland and from the presence of a pollutant generating adjacent land use, including roadways, subdivisions, and other development.

Value to Society
The site scored high for the water quality improvement value to society because the wetland is in a sub-basin with an aquatic resource on the 303d list and the wetland discharges directly to a stream on the 303d list.

Project Impacts and On-Site Enhancement
The project will result in the loss of some vegetated buffer and wetland areas that perform water quality functions. These impacts will be offset by dense planting of native plants and removal of shallowly rooted invasive species (Armenian blackberry), in the buffer and wetland. Replacement by native species with dense, fibrous root systems throughout the wetland and buffer areas will enable these to better perform water quality functions through the binding of soil to prevent erosion and increase nutrient uptake.

Off-Site Mitigation - KFMB Contribution to Water Quality
All pre-existing wetlands at the KFMB provided a medium level of water quality functions (total water quality score of 6-7 points) and a low or medium site potential function for water quality improvement using the Washington State Wetland Rating System for Western Washington (Rating System). All wetlands are located within the floodplain of Bear Creek and are inundated during overbank flood events. However, lack of surface channel connections with Bear Creek or existing onsite ditches and limited extent of seasonal ponding during non-flood events restricted the site potential of existing wetlands to provide water quality functions. In addition, because the site was in agricultural use, pollutant filtering capability of vegetation in site wetlands was limited. All existing wetlands now rate high for providing water quality improvement that is valuable to society because both Bear Creek adjacent to the Bank and the tributary Perrigo Creek that flows through the Bank site are listed on the State of Washington 303d list as impaired for water quality parameters. Perrigo Creek is impaired for temperature and a Total Maximum Daily Load (TMDL) has been established. Bear Creek is listed for bioassessment, dissolved oxygen, temperature, and bacteria and TMDLs have been established for the latter three parameters. Through the rehabilitation and enhancement actions of the KFMB, wetlands on the Bank site are expected to be providing a functional lift in water quality compared to preconstruction conditions. In addition, the bank has created a net increase of 51.1 acres of wetland and 2.6 acres of stream channel/wetland complex. Post-construction wetland and floodplain functions related to water quality, such as removing sediments, nutrients, metals, and toxic organics will continue to significantly increase as native vegetation establishes.

The Bank's riparian restoration and stream plantings are an integral part of a regional effort to restore riparian conditions and functions and reduce temperatures in Bear Creek and the

Sammamish River, which has benefits to downstream waters in the watershed, including receiving waters in Lake Washington. Implementation of the bank included vegetating the banks of Bear Creek and the tributary floodplain streams within the Bank site with trees and shrubs will provide additional shading during the critical months in the summer and fall when adult salmon are migrating and spawning. The Bank was designed so that during the summer and fall periods when water levels across the Bank site will be at their lowest levels, water will be confined to the riparian stream channel areas, rather than spreading out or ponding across the site which could warm surface waters. Riparian wetlands are not expected to have extended periods of standing water June through October. Additionally, floodplain streams will maintain their groundwater connection, providing a cold-water source for adjacent and downstream waters.

10.2 Hydrologic Function

Site Potential

Due to its hydrogeomorphic class (slope) Wetland B does not detain large amounts of water although it still scored moderate for site potential value due the presence of vegetation in the wetland that can slow surface flows.

Landscape Potential

The landscape potential of the site to provide hydrologic functions is high. The wetland has the opportunity to slow stormwater runoff because there are areas of land that generate excess runoff within 150 feet of the wetland, and more than a quarter of the contributing basin is covered with intensive human land use.

Value to Society

The hydrologic functions of Wetland B scored high for its value to society, as there are both fish resources in Kelsey Creek and human infrastructure such as roads and houses adjacent to the stream. Wetlands that can help detain flows provide value to society.

Project Impacts and On-Site Enhancement

The area of fill is outside the floodplain and has minimal surface water ponding, even during the wet times of the year. Project impacts on this function, while they are not non-existent, are minimal. The creation of forested vegetation classes that are densely vegetated in areas that are currently dominated by shrubs or emergent vegetation will provide some benefit to slowing the flow of water through the site. The project stormwater requirements will also be implemented to minimize and slow the flow of water from impervious surfaces on-site.

Off-Site Mitigation - KFMB Contribution to Hydrologic Functions

All pre-existing wetlands on the Bank site provided a medium level of hydrologic functions (total hydrologic score of 7 points) using the Rating System. Restoration actions at KFMB have created a net increase of 51.1 acres of wetland and 2.6 acres of stream channel/wetland complex. This large area of new wetland and stream channels will result in improvement to wetland and floodplain hydrologic functions and watershed-scale hydrologic processes, including increased available flood storage volume, attenuation of flood flows, reductions in peak flood flows, and groundwater recharge.

10.3 Wildlife Habitat Functions

Site Potential

The site has patches of emergent, scrub shrub and forested vegetation layers, per the Cowardin classification. The presence of weeds and limited water regimes and habitat features limited its score somewhat. As a result of these characteristics the site scored moderate for the habitat site potential.

Landscape Potential

The landscape potential for the site scored in the low range. Potential is limited by the presence of human disturbances in the immediate vicinity of the wetland, as well as within a kilometer of the site, which includes a heavily developed urban and suburban area.

Value to Society

The site also scored high for habitat value to society due to the presence of Washington Department of Fish and Wildlife priority habitats and fish species in Kelsey Creek. The adjacent off-site wetlands are also associated with a public park and have significant value due to their public access and education potential.

Project Impacts and On-Site Enhancement

Project impacts to habitat are occurring in weedy, disturbed areas and adjacent to an existing disturbance and human presence (a subdivision). These impacts will be mitigated through on-site enhancement treatments which are designed to reduce the invasive species cover and replace with native species that will provide habitat for native species as well as provide screening of the wetland from development. Without enhancement, this function would not be expected to improve, as weeds would continue to dominate much of the buffer.

Off-Site Mitigation - KFMB Contribution to Habitat Functions

All pre-existing wetlands on the Bank site provided a medium level of habitat functions (total habitat score of 6 points) using the Rating System. Plant communities previously were entirely emergent and dominated by non-native and invasive species, farmed, and lacking in habitat complexity. Overall habitat suitability for wetland-associated birds, mammals, amphibians, fish and invertebrates has improved substantially over previous conditions because of: the net increase in acreage of wetland and aquatic area; improved access for aquatic organisms to floodplain wetland and aquatic areas; the increased variety of hydroperiods; the increase in vegetation species richness, habitat diversity and interspersion, and structural diversity; the addition of habitat enhancement features such as large woody debris; and accessibility to contiguous habitat areas such as the adjacent WSDOT mitigation site and NPGA areas along Bear Creek. The restoration of 7,114 linear feet of ditched tributary streams and addition of 5,162 linear feet of stream channel will increase available suitable habitat for salmonids and other fish species, including ESA-listed species, including additional off-channel rearing and refuge habitat within the floodplain streams and deeper backwater areas connected to Bear Creek.

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Appendix E

Bond Quantity Worksheet

Appendix A

CONSULTANT QUALIFICATIONS

Ms. Teresa Opolka, PWS
Wetland Biologist/Botanist

EDUCATION

B.S., Biology, 1998, Seattle University

REGISTRATIONS/CERTIFICATIONS

Professional Wetland Scientist, Society of Wetland Scientists

TRAINING

2016 Washington Department of Ecology Ordinary High Water Mark Training, October 2021
2014 Washington Department of Ecology Western Washington Rating System, April 2015
Designing and Installing Mitigation and Restoration Projects, April 2019
Using the Credit Debit Method for Estimating Mitigation Needs May 2018
Using the Field Indicators for Hydric Soils, June 2011
Advanced Hydric Soils, May 2006
Wetland and Upland Habitat Restoration Design, April 2006
Using the Revised Washington State Wetland Rating System in Western Washington, May 2005
Ordinary High Water Mark Determination Training, May 2003
Wetland Delineation Training Course, USACE, January 2002
Introduction to Grasses, Sedges, and Rushes, Fall 2003

EXPERIENCE SUMMARY

Twenty years of experience as a wetland biologist and botanist. Responsibilities have included wetland and stream delineations and reports, wetland functional value assessments, wetland monitoring, wetland/stream mitigation plans, vegetation surveys, and vegetation sampling and monitoring in wetlands and forests in the Pacific Northwest. She has authored numerous technical reports in support of local, state and federal permitting in many jurisdictions.

Wetland and Stream Delineations

- Assessed thousands of acres of land for the presence/absence of wetlands and streams. Experience working in the Western Mountains, Valleys and Coast Region, Alaska Region, and the Arid West Region. Experience includes delineations in a variety of habitat types as well as on disturbed lands, including disturbances resulting from land use violations caused by unpermitted fill and clearing, legally permitted uses such as historical and current agricultural uses, and changing hydrological conditions caused by urbanization.

Technical Writing and Permitting

- Experienced working as part of a project team on a variety of project types. Past work includes development projects for the private and public sector as well as nonprofit organizations. Experience ranges from small residential projects to large projects with potential impacts at a landscape scale such as inter- and intra-state transmission lines, timber sales, and mining projects. Experienced working on federal, state, and private land.
- Prepared Critical Area Reports, Biological Evaluations, JARPA applications, resource reports and botanical and wetland sections of Environmental Impact Statements in eastern and western Washington, Oregon and Alaska. Prepared wetland and stream delineation reports, feasibility studies, functional assessments, and wetland and stream mitigation plans. Mitigation plans include sites with wetland creation, enhancement and stream and wetland buffer enhancement.

Performance Monitoring

- Monitored over 75 implemented wetland mitigation and stream enhancement projects in eastern and western Washington.

Appendix B

Wetland Delineation and Rating Form Datasheets for Wetland B

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

Project/Site: Olteanu/City Parcel 332505-9024 City/County: Bellvue/King Sampling Date: 7/10/2021

Applicant/Owner: Olteanu State: WA Sampling Point: DP#1

Investigator(s): T.Opolka Section, Township, Range: 33/25/05E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR): A Lat: Long: Datum:

Soil Map Unit Name: Alderwood gravelly sandy loam, 8-15% slopes NWI Classification: PSSA

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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 6)				
1. *Salix lasiandra*	70	Y	48.3	FACW
2. *Rubus spectabilis*	75	Y	51.7	FAC
3.				
4.				
5.				
	145 = Total Cover			
Herb Stratum (Plot size: 3)				
1. *Impatiens capensis*	40	Y	100.0	FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	40 = Total Cover			
Woody Vine Stratum (Plot size: 6')				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	75	x 3 =	225
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	185 (A)		445 (B)

Prevalence Index = B/A = 2.405

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:

SOIL

Sampling Point: DP#1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 4/1	95	10YR 4/6	5	C	M	Sandy silt loam	
9-18	10YR 4/1	90	10YR 4/6	10	C	M	Sandy 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: (Applicble 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 Soil Present? ◉ Yes ○ No

Remarks:

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 Stressed 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): 5

Saturation Present? (includes capillary fringe) ◉ Yes ○ No Depth (inches): to surface

Wetland Hydrology Present? ◉ Yes ○ No

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

Remarks:

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

Project/Site: Olteanu/City Parcel 332505-9024 City/County: Bellvue/King Sampling Date: 7/10/2021

Applicant/Owner: Olteanu State: WA Sampling Point: DP#2

Investigator(s): T.Opolka Section, Township, Range: 33/25/05E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0

Subregion (LRR): A Lat: Long: Datum:

Soil Map Unit Name: Alderwood gravelly sandy loam, 8-15% slopes NWI Classification: upland scrub shrub

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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15)	Absolute % Cover	Dom. Sp.?	Relative % Cover	Indicator Status
1.				
2.				
3.				
4.				
	= Total Cover			
Sapling/Shrub Stratum (Plot size: 6)				
1. *Rubus armeniacus*	90	Y	100.0	FAC
2.				
3.				
4.				
5.				
	90 = Total Cover			
Herb Stratum (Plot size: 3)				
1. *Polystichum munitum*	60	Y	100.0	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	60 = Total Cover			
Woody Vine Stratum (Plot size: 6')				
1.				
2.				
	= Total Cover			

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	150 (A)		510 (B)

Prevalence Index = B/A = 3.400

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:

SOIL

Sampling Point: DP#2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	100					sandy 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: (Applicble 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: 7"

Depth (inches): rock

Hydric Soil Present? ○ Yes ◉ No

Remarks:

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 Stressed 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:

Wetland name or number: Wetland B Slope

RATING SUMMARY - Western Washington

Name of wetland (or ID#): Wetland B Slope **Date of site visit:** 05/12/2022
Rated By: Neil Molstad **Trained by Ecology? Yes** [X] **No** [ ] **Date of Training:** N/A
HGM Class used for rating: Slope
Wetland has multiple HGM classes? Yes [ ] **No** [X]

NOTE: Form is not complete without the figures requested *(figures can be combined).*
Source of base aerial photo/map:

OVERALL WETLAND CATEGORY: [**Category III**] (based on functions [X] or special characteristics [ ])

1. Category of wetland based on FUNCTIONS

[ ] **Category I** - Total score = 23 - 27
[ ] **Category II** - Total score = 20 - 22
[X] **Category III** - Total score = 16 - 19
[ ] **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	**M**	**M**	**M**	
Landscape Potential	**M**	**M**	**L**	
Value	**H**	**L**	**H**	**Total**
Score Based on Ratings	**7**	**5**	**6**	**18**

Score for each function based on three ratings (order of ratings is not important)
9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	**Not Applicable**

Wetland name or number: Wetland B Slope

Maps and figures required to answer questions correctly for Western Washington

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	S 2.1, S 5.1	
1km Polygon: Area that extends 1km form entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number: Wetland B Slope

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0 Does the site have the potential to improve water quality?

S 1.1 What are the characteristics of the average slope of the wetland?

Slope is 1% or less	points = 3	
Slope is >1%-2%	points = 2	
Slope is >2%-5%	points = 1	
Slope is greater than 5%	points = 0	**Score: 1**

S 1.2 What is the soil 2in below the surface or duff layer?

Mapped as true clay or organic (muck or peat)	points = 3	
Soil texture identified as clay or organic in field	points = 3	
Soil texture identified as clay or organic by laboratory test	points = 3	
None of the above	points = 0	**Score: 0**

S 1.3 Characteristics of the plants in the wetland that trap sediments and pollutants

Dense, uncut, herbaceous plants cover >90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants cover >50% of the wetland area	points = 3	
Dense, woody, plants cover >50% of the wetland area	points = 2	
Dense, uncut, herbaceous plants cover >25% of the wetland area	points = 1	
Does not meet any of the criteria above for plants	points = 0	**Score: 6**

Total for S 1: 7

Rating of Site Potential [ ] **12-16 = H** [X] **6-11 = M** [ ] **0-5 = L** *Record the rating on the first page*

S 2.0 Does the landscape have the potential to support the water quality function of the site?

S 2.1 Is >10% of the area within 150ft on the uphill side of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	**Score: 1**

S 2.2 Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?

Yes	points = 1	
No	points = 0	**Score: 0**

S 2.3 What are the other sources of pollutants coming into the wetland?

Total for S 2: 1

Rating of Landscape Potential [ ] **3-4 = H** [X] **1-2 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: Wetland B Slope

S 3.0 Is the water quality improvement provided by the site valuable to society?		
S 3.1 Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?		
Yes	points = 1	
No	points = 0	**Score: 1**
S 3.2 Is the wetland in a basin or sub-basin where water quality is an issue?		
Yes	points = 1	
No	points = 0	**Score: 1**
S 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?		
Yes	points = 2	
No	points = 0	**Score: 0**
	Total for S 3:	**2**

Rating of Value [X] **2-4 = H** [ ] **1 = M** [ ] **0 = L** *Record the rating on the first page*

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradtion

S 4.0 Does the site have the potential to reduce flooding and erosion?		
S 4.1 What are the characteristics of the plants that reduce the velocity of surface flows during storms?		
Dense, uncut, rigid plants cover >90% of the wetland area	points = 1	
All other conditions	points = 0	**Score: 1**
	Total for S 4:	**1**

Rating of Site Potential [X] **1 = M** [ ] **0 = L** *Record the rating on the first page*

S 5.0 Does the landscape have the potential to support the hydrologic functions of the site?		
S 5.1 Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?		
Yes	points = 1	
No	points = 0	**Score: 1**
	Total for S 5:	**1**

Rating of Landscape Potential [X] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: Wetland B Slope

S 6.0 Are the hydrologic functions provided by the site valuable to society?		
S 6.1 Is the wetland in a landscape that has flooding problems?		
Flooding occurs in a sub-basin that is immediately down-gradient of wetland.	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
There are no problems with flooding downstream of the wetland	points = 0	**Score: 0**
S 6.2 Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
Yes	points = 2	
No	points = 0	**Score: 0**
	Total for S 6:	**0**

Rating of Value [ ] **2-4 = H** [ ] **1 = M** [X] **0 = L** *Record the rating on the first page*

Wetland name or number: Wetland B Slope

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- [ ] Aquatic Bed
- [x] Emergent
- [x] Scrub-shrub
- [x] Forested
- [ ] Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures present	points = 0	**Score: 2**

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- [ ] Permanently flooded or inundated
- [ ] Seasonally flooded or inundated
- [ ] Occasionally flooded or inundated
- [x] Saturated only
- [ ] Permanently flowing stream or river in, or adjacent to, the wetland
- [ ] Seasonally flowing stream in, or adjacent to, the wetland
- [ ] Lake Fringe wetland
- [ ] Freshwater Tidal wetland

4 or more types present	points = 3	
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2	
2 types present	points = 1	
1 type present	points = 0	
None present	points = 0	**Score: 0**

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2	
5-19 species	points = 1	
<5 species	points = 0	**Score: 1**

Wetland name or number: Wetland B Slope

H 1.4 What is the interspersion of habitats?

High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	**Score: 2**

H 1.5 What are the special habitat features in the wetland?

- [x] Large, downed, woody debris within the wetland (>4in diameter and 6ft long).
- [x] Standing snags (dbh >4in) within the wetland
- [ ] Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)
- [ ] Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)
- [ ] At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- [ ] Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)

6 habitats selected	points = 6	
5 habitats selected	points = 5	
4 habitats selected	points = 4	
3 habitats selected	points = 3	
2 habitats selected	points = 2	
1 habitat selected	points = 1	
No habitats selected	points = 0	**Score: 2**

Total for H 1: 7

Rating of Site Potential [ ] **15-18 = H** [X] **7-14 = M** [ ] **0-6 = L** *Record the rating on the first page*

H 2.0 Does the landscape have the potential to support habitat functions of the site?

H 2.1 What is the percentage of accessible habitat within 1km of the wetland?

>33% of 1km Polygon	points = 3	
20-33% of 1km Polygon	points = 2	
10-19% of 1km Polygon	points = 1	
<10% of 1km Polygon	points = 0	**Score: 1**

H 2.2 What is the percentage of total habitat in a 1km polygon around the wetland?

Total habitat is >50% of the Polygon	points = 3	
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the Polygon and in >3 patches	points = 1	
Total habitat is <10% of the Polygon	points = 0	**Score: 1**

Wetland name or number: Wetland B Slope

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use	points = -2	
<50% of the Polygon is high intensity land use	points = 0	**Score: -2**
	Total for H 2:	**0**

Rating of Landscape Potential [ ] **4-6 = H** [ ] **1-3 = M** [X] **0 = L** *Record the rating on the first page*

H 3.0 Is the habitat provided by the site valuable to society?

H 3.1 Does the site provide habitat for species valued in laws, regulations, or policies?

- [ ] Aspen Stands
- [✓] Biodiversity Areas and Corridors
- [ ] Herbaceous Balds
- [ ] Old-growth/Mature Forests
- [ ] Oregon White Oak
- [✓] Riparian
- [ ] Westside Prarie
- [ ] Fresh Deepwater
- [✓] Instream
- [ ] Nearshore (Coastal, Open Coast, Puget Sound)
- [ ] Caves
- [ ] Cliffs
- [✓] Snags and Logs
- [ ] Talus

The following criteria automatically score 2 points:

- [ ] The wetland provides habitat for Threatened or Endangered species
- [ ] The wetland is mapped as a location for an individual WDFW priority species
- [ ] The wetland is a Wetland of High Conservation Value
- [ ] The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	**Score: 2**
	Total for H 3:	**2**

Rating of Value [X] **2 = H** [ ] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: Wetland B Slope

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

☐ The dominant water regime is tidal
☐ The wetland is vegetated
☐ The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

Result: Not an Estuarine Wetland

SC 1.2 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?

Yes - Category I Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac in size and meets at least two of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species.
☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland
☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.

Yes - Category I Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Is the wetland listed by Washington Natural Heritage Program WDNR as a Wetland of High Conservation Value (WHCV)?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result: Not a Wetland of High Conservation Value

Wetland name or number: Wetland B Slope

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3
No - Go to SC 3.2 **Result: Go to SC 3.2**

SC 3.2 Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?

Yes - Go to SC 3.3
No - Not a Bog Wetland **Result: Not a Bog Wetland**

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland
No - Go to SC 3.4 **Result:**

SC 3.4 Is an area with peats or mucks forested (>30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann Spruce, or western white pine AND any of the species (or combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland
No - Not a Bog Wetland **Result:**

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

- [ ] Old-growth forests
- [ ] Mature forests

Yes - Category I Forested Wetland
No - Not a Forested Wetland **Result: Not a Forested Wetland**

Wetland name or number: Wetland B Slope

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 Coastal Lagoons: Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or rocks

☐ The depression in which the wetland is located contains ponded water that is saline or brackish (>0.5 ppt) during most of the year in at least a portion of the open water area (measured near the bottom)

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland

Result: Not a Coastal Lagoon Wetland

SC 5.2 Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species).

☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon

Result:

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland

Result: Not an Interdunal Wetland

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4

Result:

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland

Result:

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

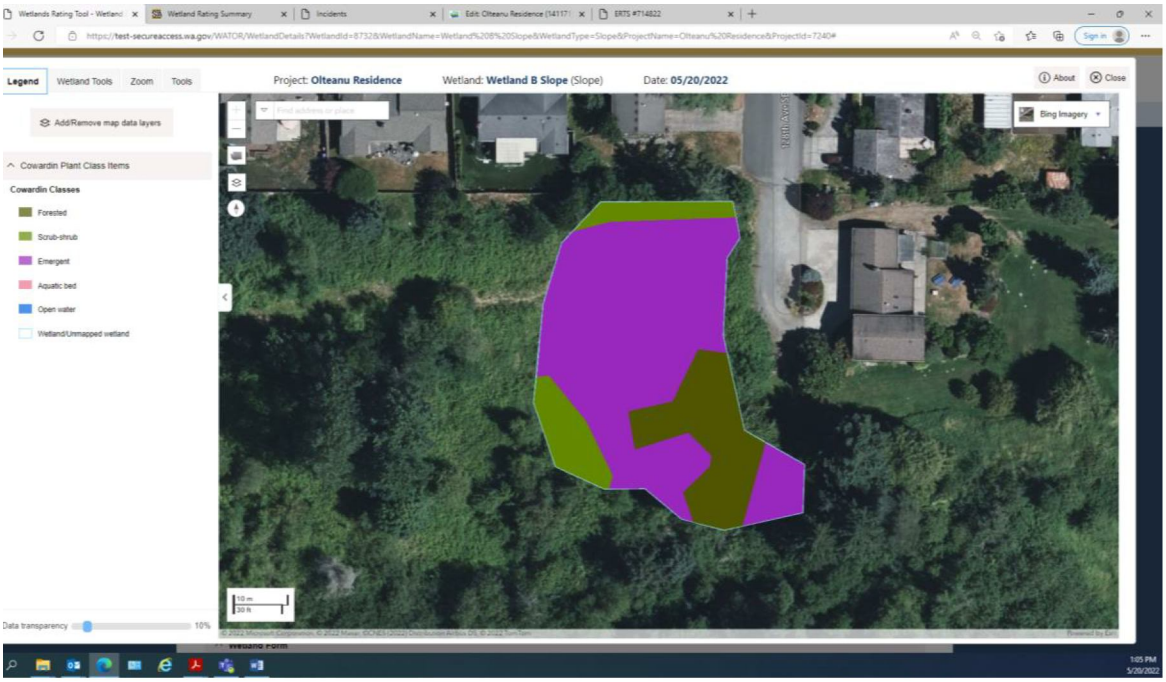
Yes - Category III Interdunal Wetland

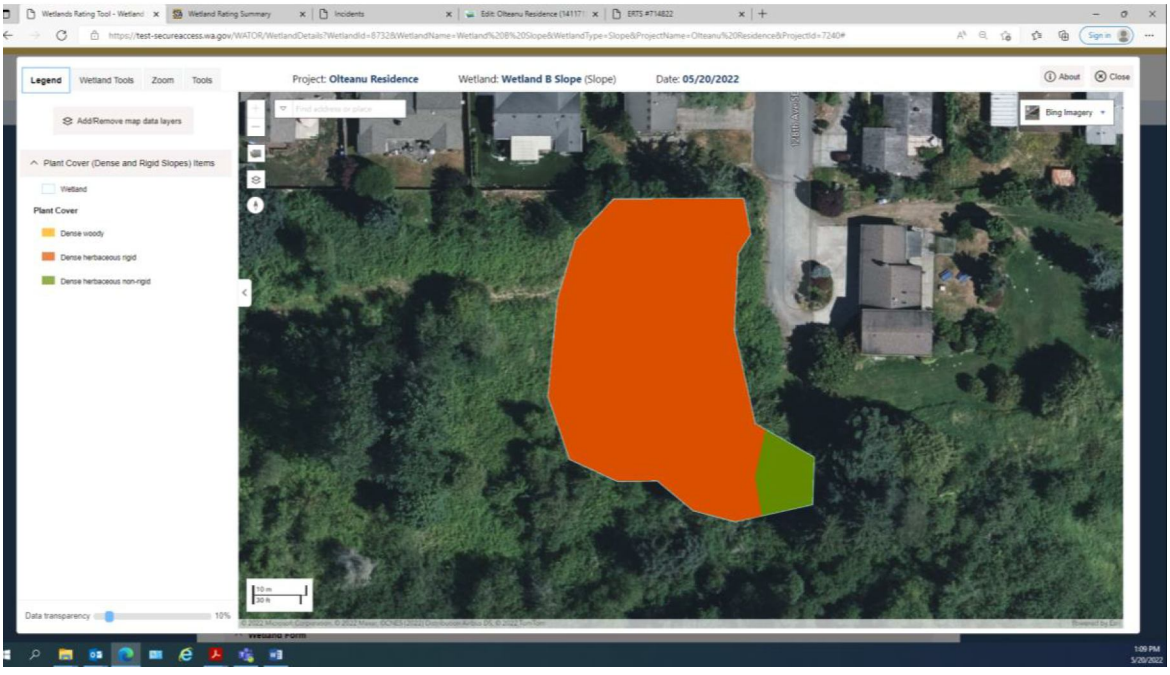
No - Category IV Interdunal Wetland

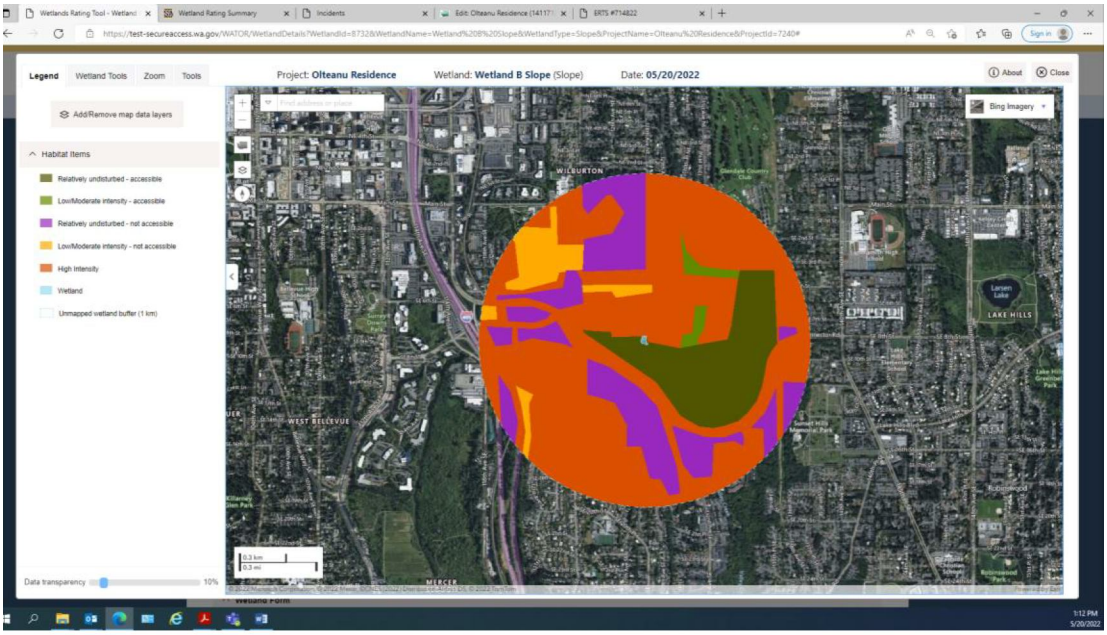
Result:

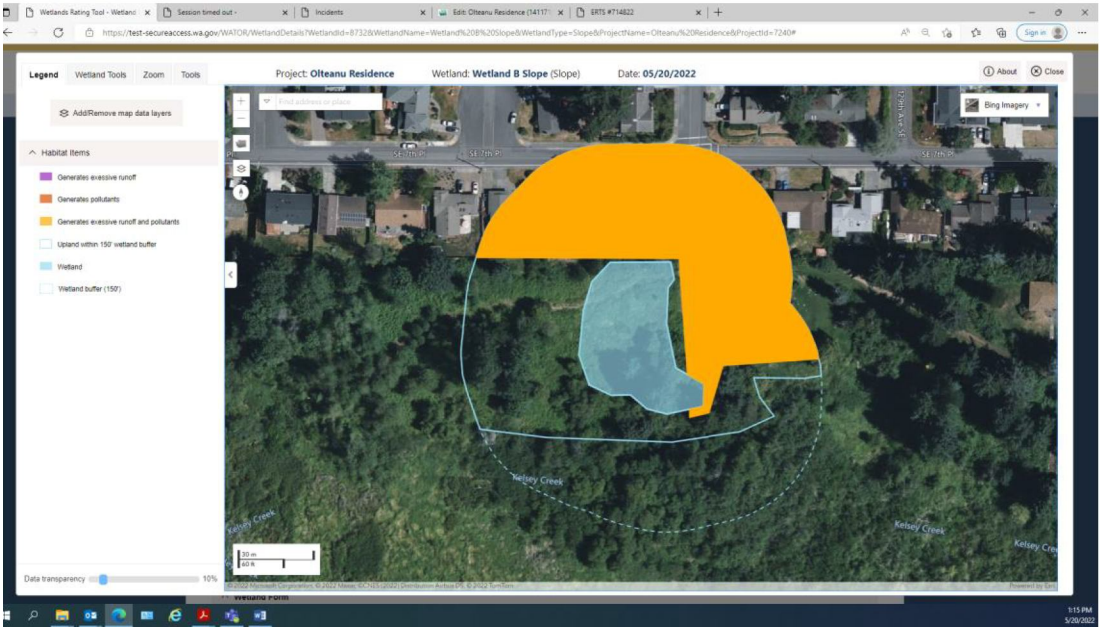
Wetland name or number: Wetland B Slope

Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	**Final Category: Not Applicable**


Legend
Wetland Tools
Zoom
Tools
Project: Olteanu Residence
Wetland: Wetland B Slope (Slope)
Date: 05/20/2022
About
Close
Add/Remove map data layers
Cowardin Plant Class Items
Cowardin Classes
Forested
Scrub-shrub
Emergent
Aquatic bed
Open water
Wetland/Unmapped wetland
Bing Imagery
Data transparency
10%


Legend
Wetland Tools
Zoom
Tools
Project: Olteanu Residence
Wetland: Wetland B Slope (Slope)
Date: 05/20/2022
About
Close
Add/Remove map data layers
Plant Cover (Dense and Rigid Slopes) Items
Wetland
Plant Cover
Dense woody
Dense herbaceous rigid
Dense herbaceous non-rigid
Bing Imagery
Data transparency
10%


Legend
Wetland Tools
Zoom
Tools
Project: Olteanu Residence
Wetland: Wetland B Slope (Slope)
Date: 05/20/2022
About
Close
Add/Remove map data layers
Habitat Items
Relatively undisturbed - accessible
Low/Moderate intensity - accessible
Relatively undisturbed - not accessible
Low/Moderate intensity - not accessible
High Intensity
Wetland
Unmapped wetland buffer (1 km)
Bing Imagery
WILBURTON
WEST BELLEVUE
MERCER
LAKE HILLS
Data transparency
10%


Legend
Wetland Tools
Zoom
Tools
Project: Olteanu Residence
Wetland: Wetland B Slope (Slope)
Date: 05/20/2022
About
Close
Add/Remove map data layers
Habitat Items
Generates exessive runoff
Generates pollutants
Generates exessive runoff and pollutants
Upland within 150' wetland buffer
Wetland
Wetland buffer (150')
Bing Imagery
SE 7th St
SE 7th Pl
Kelsey Creek
Data transparency
10%

Appendix C

Keller Farm Mitigation Bank Service Area Maps

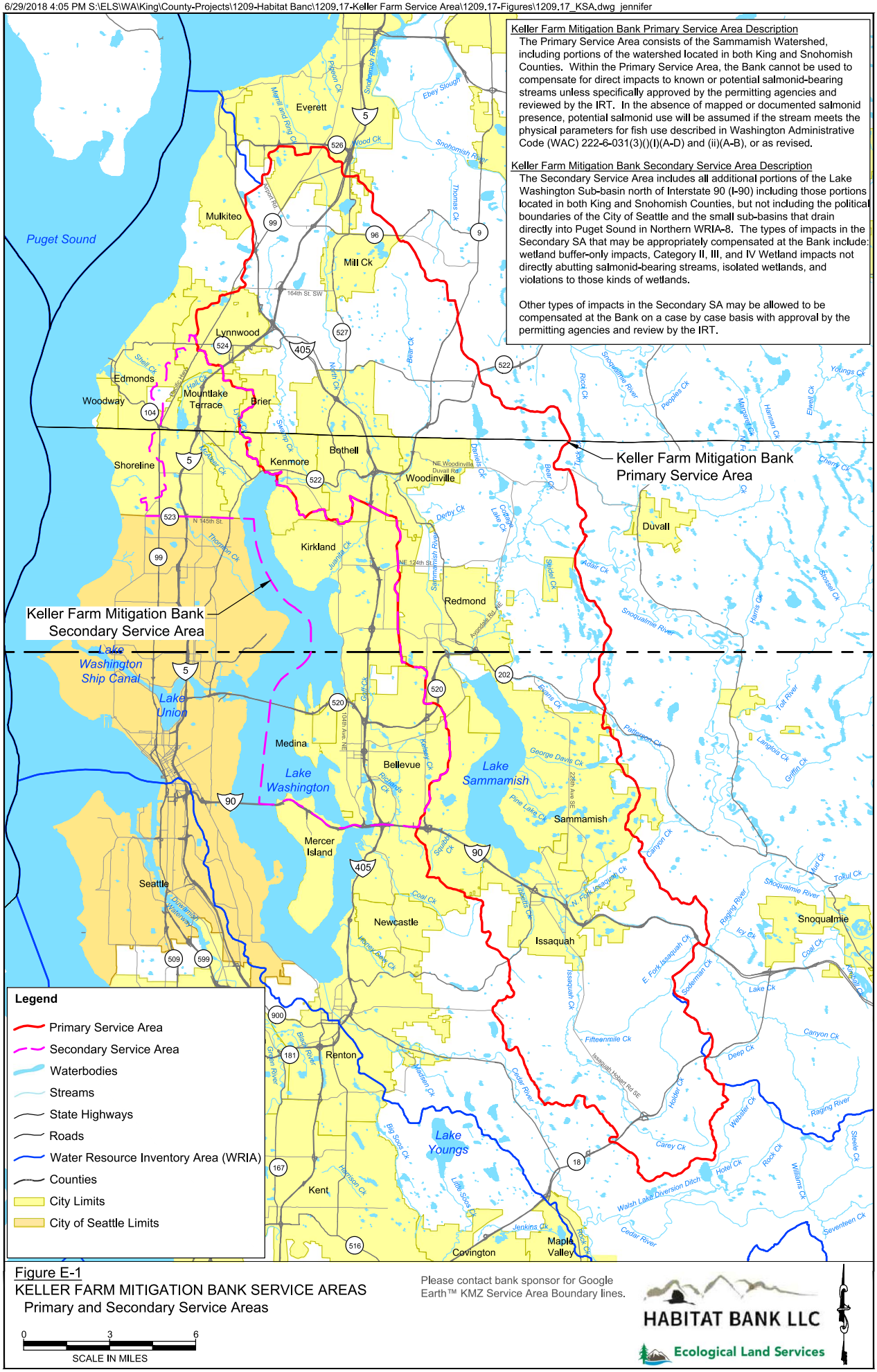
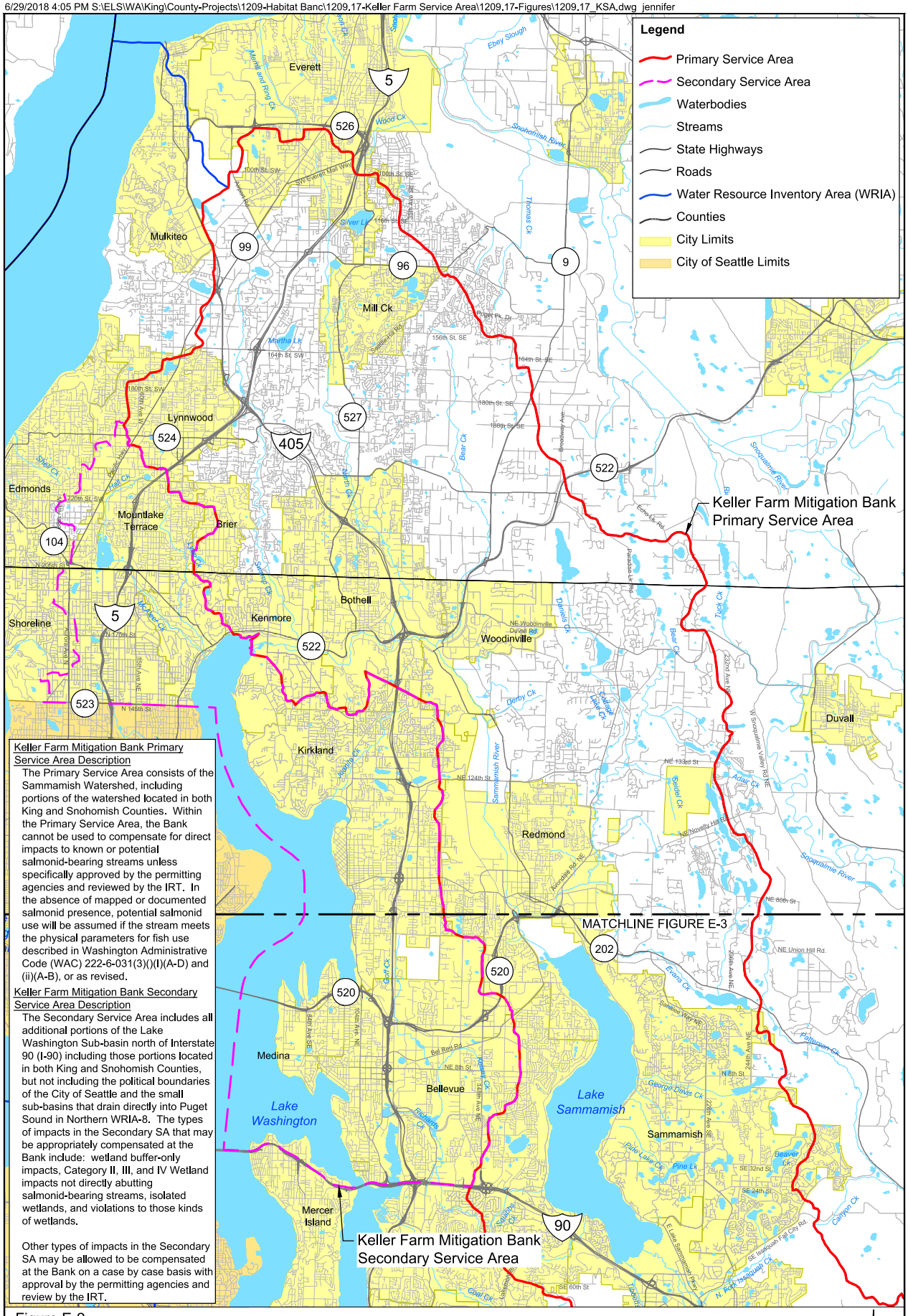


Figure E-1
KELLER FARM MITIGATION BANK SERVICE AREAS
Primary and Secondary Service Areas

Please contact bank sponsor for Google Earth™ KMZ Service Area Boundary lines.

HABITAT BANK LLC
Ecological Land Services



Keller Farm Mitigation Bank Primary Service Area Description

The Primary Service Area consists of the Sammamish Watershed, including portions of the watershed located in both King and Snohomish Counties. Within the Primary Service Area, the Bank cannot be used to compensate for direct impacts to known or potential salmonid-bearing streams unless specifically approved by the permitting agencies and reviewed by the IRT. In the absence of mapped or documented salmonid presence, potential salmonid use will be assumed if the stream meets the physical parameters for fish use described in Washington Administrative Code (WAC) 222-6-031(3)()(I)(A-D) and (ii)(A-B), or as revised.

Keller Farm Mitigation Bank Secondary Service Area Description

The Secondary Service Area includes all additional portions of the Lake Washington Sub-basin north of Interstate 90 (I-90) including those portions located in both King and Snohomish Counties, but not including the political boundaries of the City of Seattle and the small sub-basins that drain directly into Puget Sound in Northern WRIA-8. The types of impacts in the Secondary SA that may be appropriately compensated at the Bank include: wetland buffer-only impacts, Category II, III, and IV Wetland impacts not directly abutting salmonid-bearing streams, isolated wetlands, and violations to those kinds of wetlands.

Other types of impacts in the Secondary SA may be allowed to be compensated at the Bank on a case by case basis with approval by the permitting agencies and review by the IRT.

Figure E-2
KELLER FARM MITIGATION BANK SERVICE AREAS
Primary and Secondary Service Areas Northern Boundaries

Please contact bank sponsor for Google Earth™ KMZ Service Area Boundary lines.

0 2 4
SCALE IN MILES

HABITAT BANK LLC
Ecological Land Services

Mitigation Bank Primary Service Area Description

y Service Area consists of the Sammamish
including portions of the watershed located in
nd Snohomish Counties. Within the Primary
a, the Bank cannot be used to compensate for
cts to known or potential salmonid-bearing
ess specifically approved by the permitting
nd reviewed by the IRT. In the absence of
documented salmonid presence, potential
se will be assumed if the stream meets the
rameters for fish use described in Washington
ve Code (WAC) 222-6-031(3)()(I)(A-D) and
as revised.

Mitigation Bank Secondary Service Area

dary Service Area includes all additional portions
Washington Sub-basin north of Interstate 90
ing those portions located in both King and
Counties, but not including the political
of the City of Seattle and the small sub-basins
irectly into Puget Sound in Northern WRIA-8.
f impacts in the Secondary SA that may be
y compensated at the Bank include: wetland
mpacts, Category II, III, and IV Wetland impacts


Redmond
Avondale Rd NE
NE Novelty Hill Rd
202
520
Goff Ck
Evans Ck
236th Ave NE
Sahalee Way NE
Bel Red Rd
NE 8th St
Kelsey Ck
148th Ave NE
Bellevue
George Davis Ck
N 8th St
Lake
Sammamish
228th Ave SE
Richards
Ck
Pine Lake Ck
Pine Lk
Sammamish
Squibbs
Ck
90
E Lake Sammamish Pkwy
405
Blvd SE

Appendix D

Available KFMB Credit Ledger

Keller Farm Mitigation Bank Credit Ledger

Contact: Victor Woodward (425) 785-8428 — Date: August 19, 2021

Transaction Date	Credits Received: Credits Received	Credits Received: Bank Performance Standards	Credits Debited: Credits Debited	Credits Debited: Credits Reserved	Credits Debited: Permittee, Address, Phone	Credits Debited: Permitting Agencies and Permit Numbers	Credits Debited: Permit Issuance Date	Credits Debited: Project Location	Credits Debited: Brief Description of Impact(s) Compensated for by KFMB Credits
April 29, 2020	7.4600	1A, 1B, 1C, 1D and 1E							IRT credit release for the achievement of MBI performance standards: 1A, 1B, 1C, 1D and 1E.
September 10, 2020			1.5130		Sound Transit Attn: Ellie Ziegler 401 S Jackson Street Seattle, WA 98104-9826	USACE: NWS-2018-173 WA Dept. of Ecology: #16844 City of Redmond: LAND-2019-00691	Not yet issued 10/10/19 12/02/19	The downtown Redmond link light rail extension project is a 3.4-mile extension from the Redmond Technology Center at NE 40th Street to downtown in the City of Redmond, Washington.	Project impacts include 0.938 acre of permanent wetland impacts, 0.460 acre of long-term temporary wetland impacts, 0.023 acre of wetland vegetation conversion, and 0.824 acre of wetland buffer.
October 5, 2020			0.0428		Condor Homes LLC. Attn: Mr. Kyle Gellner 2215 117th Ave NE Lake Stevens, WA 98258	Snohomish County: LDA-20101495	October, 2020	The project is located in Snohomish County, Washington, Parcel #27052700103600	The project will impact 6,218 square feet of Category 2 Wetland Buffer
October 29, 2020			0.5720		Sound Transit Attn: Ellie Ziegler 401 S Jackson Street Seattle, WA 98104-9826	USACE: NWS-1999-428 King County: GRDE20-0039	February 2020 To be issued	The downtown Redmond link light rail extension project is a 3.4-mile extension from the Redmond Technology Center at NE 40th Street to downtown in the City of Redmond, Washington.	The Project will affect a portion of a Category III wetland (Wetland WKC-3) that was part of a former compensatory mitigation project completed by King County Parks in 2001 (Corps Reference Number NWS-1999-428). Sound Transit is compensating for a total of 0.572 acre of the mitigation area of Wetland WKC-3 that will be removed from the restrictive covenant.
January 11, 2021			0.0450		Issaquah School District 5150-220th Ave SE Issaquah, WA 98029 Contact: Tom Mullins Director, Capital Projects	USACE: NWS-2020-761 City of Sammamish: ROW2020-01329	11/19/2020 To be issued	The project is located within the right-of-way of Issaquah-Pine Lake Rd. SE, between SE Klahanie Boulevard and SE 44th St., and along the eastern edge of King County Tax Parcels #1524069086 and #1524069026 in the City of Sammamish, WA.	Permanent impact to .03 acres of Category 3 wetland and .05 acres of wetland and stream buffer
March 23, 2021			0.1009		Pacific Ridge-DRH, LLC Attn: Scott Borgeson 17921 Bothell-Everett Hwy. Suite 100 Bothell, WA 98012	USACE: NWS-2019-685 Snohomish County: 20-110523 LDA	09-16-2020 To be issued	The project is located at: 2707 and 20715 Richmond Road, and 329 208th Street, within the Bothell area of unincorporated Snohomish County, Washington	Unavoidable permanent impacts to critical area wetland buffer and drainage area.
April 15, 2021			0.0600		Pacific Ridge-DRH, LLC Attn: John Mirante 17921 Bothell-Everett Hwy. Suite 100 Bothell, WA 98012	Eology: AO#19800 Snohomish County: 20-113155 LDA Snohomish County: 20-102059 PSD Snohomish County: 20-102059 SPA	03-30-2021 03-08-2021 11-25-2020 11-25-2020	Located on four tax parcels in Snohomish County, Washington: 00374100300101, 00374100300102, 00374100300202, and 00374100300204	Unavoidable impacts to 2,564 sq/ft of a Category 3 Wetland.
June 22, 2021			0.0389		Julia and Michael Jeffery 24126 Carter Rd. Bothell, WA 98021	Snohomish County: 20114777 LDA Snohomish County: 20114782 RK Snohomish County: 20115206 D1	05-25-2021 05-25-2021 05-25-2021	The project is located at: 24204 Carter Road, Bothell, WA in unincorporated Snohomish County.	Unavoidable impacts to 5,640 square feet of a critical area wetland buffer.
August 16, 2021			0.0270		Tri Pointe Homes Attn: Mr. John Potts 15900 SE Eastgate Way Suite 300 Bellevue, WA 98008	USACE: NWS-2021-558 City of Redmond: SITE-2021-00140	July 28, 2021 July 27, 2021	Located along the western portion of Willows Road, southwest of the intersection of NE 124th Street and Willows Road, in the City of Redmond, WA	490 sq/ft of wetland fill and 2,592 square feet of critical area buffer impact
August 19, 2021			0.0370		Tri Pointe Homes Attn: Mr. John Potts 15900 SE Eastgate Way Suite 300 Bellevue, WA 98008	USACE: NWS-2019-672 City of Redmond: SITE-2021-00140	Sept. 25, 2020 July 27, 2021	located on two tax parcels (#2726059026 and #2726059024) southwest of the intersection of NE 124th Street and Willows Road in the City of Redmond, WA	1,934 square feet of impact to a CAT 4 Wetland.
Totals:	7.4600		2.4366	0.000					
Current Credit Balance KFMB:	5.0234								

Appendix E

Bond Quantity Worksheet

Project Name: Olteanu Residence **Date:** 4-Apr-22 **Prepared by:** T.Opolka

21-368 **Project Description:**

Applicant: **Phone:**

PLANT MATERIALS (includes labor cost for plant installation)

Type	Unit Price	Unit	Quantity	Description	Cost
PLANTS: Potted, 4" diameter, medium	$5.00	Each			$ -
PLANTS: Container, 1 gallon, medium soil	$11.50	Each	705.00		$ 8,107.50
PLANTS: Container, 2 gallon, medium soil	$20.00	Each	382.00		$ 7,640.00
PLANTS: Container, 5 gallon, medium soil	$36.00	Each	39.00		$ 1,404.00
PLANTS: Seeding, by hand	$0.50	SY			$ -
PLANTS: Slips (willow, red-osier)	$2.00	Each			$ -
PLANTS: Stakes (willow)	$2.00	Each			$ -
PLANTS: Stakes (willow)	$2.00	Each			$ -
PLANTS: Flats/plugs	$2.00	Each			$ -
				TOTAL	**$ 17,151.50**

INSTALLATION COSTS (LABOR, EQUIPMENT, & OVERHEAD)

Type	Unit Price	Unit			Cost
Compost, vegetable, delivered and spread	$37.88	CY			$ -
Decompacting till/hardpan, medium, to 6" depth	$1.57	CY			$ -
Decompacting till/hardpan, medium, to 12" depth	$1.57	CY			$ -
Hydroseeding	$0.51	SY			$ -
Labor, general (landscaping other than plant installation)	$40.00	HR			$ -
Labor, general (construction)	$40.00	HR			$ -
Labor: Consultant, supervising	$55.00	HR	16.00		$ 880.00
Labor: Consultant, on-site re-design	$95.00	HR			$ -
Rental of decompacting machinery & operator	$70.00	HR			$ -
Sand, coarse builder's, delivered and spread	$42.00	CY			$ -
Staking material (set per tree)	$7.00	Each			$ -
Surveying, line & grade	$250.00	HR			$ -
Surveying, topographical	$250.00	HR			$ -
Watering, 1" of water, 50' soaker hose	$3.62	MSF			$ -
Irrigation - temporary	$3,000.00	Acre	1.00		$ 3,000.00
Irrigation - buried	$4,500.00	Acre			$ -
Tilling topsoil, disk harrow, 20hp tractor, 4"-6" deep	$1.02	SY			$ -
				TOTAL	**$ 3,880.00**

HABITAT STRUCTURES*

ITEMS	Unit Cost	Unit			Cost
Fascines (willow)	$ 2.00	Each			$ -
Logs, (cedar), w/ root wads, 16"-24" diam., 30' long	$1,000.00	Each			$ -
Logs (cedar) w/o root wads, 16"-24" diam., 30'	$400.00	Each			$ -
Logs, w/o root wads, 16"-24" diam., 30' long	$245.00	Each			$ -
Logs w/ root wads, 16"-24" diam., 30' long	$460.00	Each			$ -
Rocks, one-man	$60.00	Each			$ -
Rocks, two-man	$120.00	Each			$ -
Root wads	$163.00	Each			$ -
Spawning gravel, type A	$22.00	CY			$ -
Weir - log	$1,500.00	Each			$ -
Weir - adjustable	$2,000.00	Each			$ -
Woody debris, large	$163.00	Each			$ -
Snags - anchored	$400.00	Each			$ -
Snags - on site	$50.00	Each			$ -
Snags - imported	$800.00	Each			$ -
* All costs include delivery and installation				*TOTAL*	**$ -**

EROSION CONTROL

ITEMS	Unit Cost	Unit			Cost
Backfill and Compaction-embankment	$ 4.89	CY			$ -
Crushed surfacing, 1 1/4" minus	$30.00	CY			$ -
Ditching	$7.03	CY			$ -
Excavation, bulk	$4.00	CY			$ -
erosion control wattles	$0.66	LF	722.00		$ 476.52
Jute Mesh	$1.26	SY			$ -
Mulch, by hand, straw, 2" deep	$1.27	SY			$ -
Mulch, by hand, wood chips, 4" deep	$35.00	SY	137.00		$ 4,795.00
Mulch, by machine, straw, 1" deep	$0.32	SY			$ -
Piping, temporary, CPP, 6"	$9.30	LF			$ -
Piping, temporary, CPP, 8"	$14.00	LF			$ -
Piping, temporary, CPP, 12"	$18.00	LF			$ -
Plastic covering, 6mm thick, sandbagged	$2.00	SY			$ -
Rip Rap, machine placed, slopes	$33.98	CY			$ -
Rock Constr. Entrance 100'x15'x1'	$3,000.00	Each			$ -
Rock Constr. Entrance 50'x15'x1'	$1,500.00	Each			$ -
Sediment pond riser assembly	$1,695.11	Each			$ -
Sediment trap, 5' high berm	$15.57	LF			$ -
Sediment trap, 5' high berm w/spillway incl. riprap	$59.60	LF			$ -
Sodding, 1" deep, level ground	$5.24	SY			$ -
Sodding, 1" deep, sloped ground	$6.48	SY			$ -
Straw bales, place and remove	$600.00	TON			$ -

Fencing, split rail, 3' high (2-rail)	$10.54	LF			$	-
Fencing, temporary (NGPE)	$1.20	LF			$	-
Signs, sensitive area boundary (inc. backing, post, install)	$28.50	Each			$	-
				TOTAL	**$**	**-**

OTHER	*(Construction Cost Subtotal)*	**$ 26,303.02**

MAINTENANCE AND MONITORING

NOTE: Projects with multiple permit requirements may be required to have longer monitoring and maintenance terms. This will be evaluated on a case-by-case basis for development applications. Monitoring and maintance ranges may be assessed anywhere from 5 to 10 years.

Maintenance, annual (by owner or consultant)					
Less than 1,000 sq.ft. and buffer mitigation only	$ 1.08	SF		(3 X SF total for 3 annual events; Includes monitoring)	$ -
Less than 1,000 sq.ft. with wetland or aquatic area mitigation	$ 1.35	SF		(3 X SF total for 3 annual events; Includes monitoring)	$ -
Larger than 1,000 sq. ft. but less than 5,000 sq.ft. of buffer mitigation	$ 180.00	EACH		(4hr @$45/hr)	$ -
Larger than 1,000 sq. ft. but less than 5,000 sq.ft. of wetland or aquatic area mitigation	$ 270.00	EACH		(6hr @$45/hr)	$ -
Larger than 5,000 sq.ft. but < 1 acre -buffer mitigation only	$ 360.00	EACH		(8 hrs @ 45/hr)	$ -
Larger than 5,000 sq.ft. but < 1 acre with wetland or aquatic area mitigation	$ 450.00	EACH		(10 hrs @ $45/hr)	$ -
Larger than 1 acre but < 5 acres - buffer and / or wetland or aquatic area mitigation	$ 1,600.00	DAY	5.00	(WEC crew)	$ 8,000.00
Larger than 5 acres - buffer and / or wetland or aquatic area mitigation	$ 2,000.00	DAY		(1.25 X WEC crew)	$ -
Monitoring, annual (by owner or consultant)					
Larger than 1,000 sq.ft. but less than 5,000 wetland or buffer mitigation	$ 720.00	EACH		(8 hrs @ 90/hr)	$ -
Larger than 5,000 sq.ft. but < 1 acre with wetland or aquatic area impacts	$ 900.00	EACH		(10 hrs @ $90/hr)	$ -
Larger than 1 acre but < 5 acres - buffer and / or wetland or aquatic area impacts	$ 1,440.00	DAY	7.00	(16 hrs @ $90/hr)	$ 10,080.00
Larger than5 acres - buffer and / or wetland or aquatic area impacts	$ 2,160.00	DAY		(24 hrs @ $90/hr)	$ -
				TOTAL	**$ 18,080.00**

					Total	**$44,383.02**
					150%	**$66,574.53**