

# FINAL MITIGATION PLAN

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## LINDSAY ANNEXATION

REVISED JANUARY 2026



**Soundview  
Consultants**  
Environmental Assessment  
Planning + Land Use Solutions

# FINAL MITIGATION PLAN

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## LINDSAY ANNEXATION

PREPARED JUNE 20, 2025

REVISED JANUARY 16, 2026

### PROJECT LOCATION

8014, 8228, 8210, AND 8326 172<sup>ND</sup> STREET NORTHEAST  
ARLINGTON, WASHINGTON 98223

### PREPARED FOR

#### MJS INVESTORS

1140 Southeast 8<sup>th</sup> Street, Suite 200  
BELLEVUE, WASHINGTON 98004

### PREPARED BY

#### SOUNDVIEW CONSULTANTS LLC

2907 HARBORVIEW DRIVE  
GIG HARBOR, WASHINGTON 98335  
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**Soundview  
Consultants**  
Environmental Assessment  
Planning + Land Use Solutions

# Executive Summary

Soundview Consultants LLC (SVC) has been assisting MJS Investors (Applicant) with a conceptual mitigation plan for the proposed residential redevelopment of a 32.28-acre site located at 8014, 8228, 8210, and 8326 172<sup>nd</sup> Street Northeast within the City of Arlington, Washington. The Proposed Project Area (PPA; here forth referred to as the subject property) consists of five tax parcels situated in the Northeast ¼ of Section 26, Township 31 North, Range 05 East, W.M. (Snohomish County Tax Parcel Numbers 31052500200600, 31052600100100, 31052600100200, 31052600102200, and 31052600102300).

SVC investigated the subject property and publicly accessible areas within 300 feet of the project area for potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in December of 2022 and April of 2024. Using current methodology, the site identified four potentially-regulated wetlands onsite (Wetlands A – D) and one stream (Stream Z) on the subject property. Additionally, one offsite wetland (Wetland 1) was identified offsite to the west of the subject property. Arlington Municipal Code (AMC) 20.93.800 establishes wetland buffers based on wetland rating, and wetland water quality and/or habitat score. Wetlands A and D are classified as Category IV wetlands and are subject to a standard 40-foot buffer regardless of habitat score per AMC 20.93.830 Table 20.93-4 with the required use of minimization measures outlined in AMC Table 20.93-5. Wetlands B, C, and 1 are Category III wetlands with moderate habitat scores of (6 or 7) and are subject to a standard 110-foot buffer per AMC 20.93.830 Table 20.93-4 with the required implementation of a relatively undisturbed, 100-foot wide protected corridor between the wetlands and other areas specified in AMC 20.93.830(1)(A) and use of minimization measures. Stream Z is a Type Ns (non-fish habitat, seasonal) water per AMC 20.93.700 and is subject to a standard 50-foot buffer per AMC 20.93.730 Table 20.93-3. In addition, a 15-foot structure setback is required from the edge of any wetland or stream buffers per AMC 20.93.340. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species were identified within 300 feet of the subject property.

The Applicant proposes residential redevelopment of the subject property to include 167 single-family residences, internal site access and parking, open space areas, utilities, and stormwater facilities including several stormwater detention ponds that will disperse treated runoff to the outer portion of the wetland and stream buffer areas onsite to maintain existing site drainage patterns and hydrology. The project was carefully designed to minimize impacts to critical areas to the greatest extent feasible by fully utilizing all developable upland areas onsite. However, due to the odd shape of the subject property which constrains the orientation of development, the spatial requirements needed to provide a high-density residential development and associated infrastructure consistent with City development standards and the high capacity residential zoning designation of the site, the extent of encumbrance by the identified critical areas and associated buffers throughout the site, complete avoidance is not feasible. In order to meet density requirements and standards for open space, site access, utilities, and stormwater facilities associated with the proposed residential development, the proposed project requires the necessary, unavoidable complete fill of Wetland D, as well as the partial fill of Wetlands A and C. Additionally, permanent and temporary impacts to the buffers of Wetlands A, B, and C, offsite Wetland 1, and Stream Z are necessary and unavoidable in order to provide pedestrian walking trails and stormwater dispersion outfalls/trenches necessary to maintain existing site drainage patterns and hydrology. All temporary impacts will be fully restored immediately after construction is complete.

Direct impacts to Wetlands A, C, and D, indirect impacts to Wetlands A and C, and permanent impacts to the onsite wetland and stream buffer areas will be compensated through a combination of onsite, in-kind wetland creation and enhancement and buffer creation and enhancement actions. The

proposed onsite mitigation actions aim to establish higher functioning wetland habitat, improve screening and habitat between the identified critical areas and the proposed development, and, where feasible, establish protected corridors maintaining connectivity accessibility between onsite critical areas. It is anticipated that these measures will achieve a net positive ecological benefit onsite and in the greater Snohomish River watershed, and exceed the mitigation ratios establish in AMC 20.93.840(d) Table 20.93-7 to ensure no net loss of wetland or critical area buffer functions onsite. See Chapter 3 for further details and analysis.

The Applicant will submit any proposed substantial changes to the project or mitigation plan, such as significant changes to the amount, location, or design of mitigation; the goals, benchmarks, or performance standards; the monitoring or adaptive management provisions, to WSDOE for review and approval prior to implementation. Minor changes, such as alterations to the species listed in the planting plan, will be documented in the as-built report.

The table below identifies the onsite critical areas and summarizes the potential regulatory status by local, state, and federal agencies.

Feature Name	Size (Onsite)	Category <sup>1</sup>	Regulated Under KCC Chapter 11.06	Regulated Under RCW 90.48	Regulated Under Clean Water Act
Wetland A	22,644 SF	IV	Yes	Yes	Likely
Wetland B	45,715 SF	III	Yes	Yes	Likely
Wetland C	29,723 SF	III	Yes	Yes	Likely
Wetland D	117 SF	IV	Yes	Yes	Not Likely
Wetland 1	NA	III	Yes	Yes	Likely
Stream Z	~160 linear feet	Type Ns	Yes	Yes	Likely

1. Washington State Department of Ecology (WSDOE) wetland rating system (Hruby and Yahnke 2023) per AMC 20.93.800 and AMC 20.93.730

The table below summarizes the proposed critical area impacts.

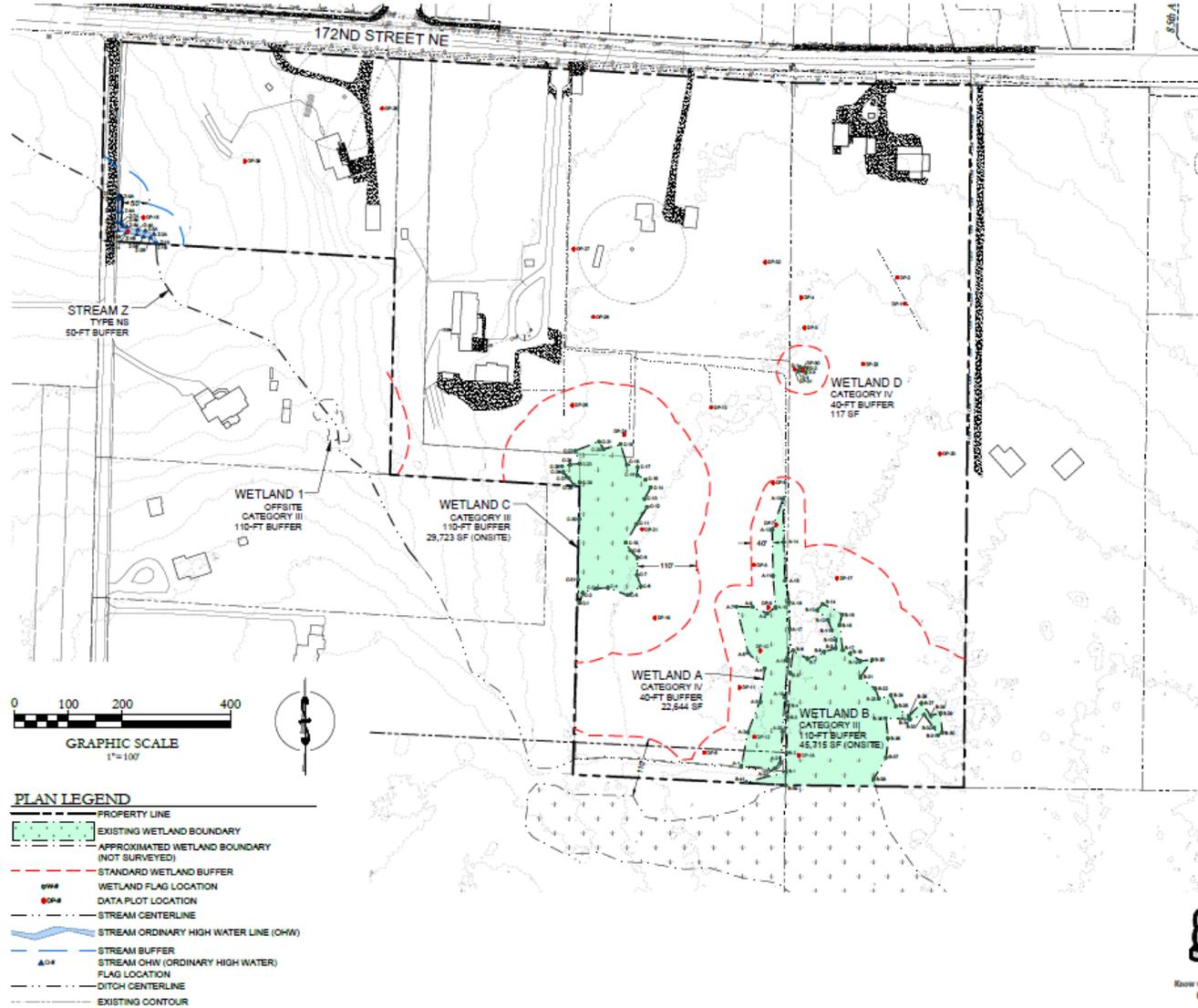
Impact Type	Total Impact Area
Direct Permanent Wetland Fill	11,399 SF
Indirect Permanent Wetland Impacts	12,003 SF
Permanent Buffer Impacts	2,467 SF
Temporary Buffer Impacts	61,374 SF

The table below summarizes the planned mitigation actions.

Mitigation Type	Mitigation Area
<i>Wetland Mitigation</i>	
Wetland Creation	47,347 SF
Wetland Restoration	20,455 SF

Mitigation Type	Mitigation Area
Wetland Enhancement	8,626 SF
Wetland as Buffer Enhancement	12,003 SF
<i>Buffer Mitigation</i>	
Buffer Creation	9,164 SF
Buffer Enhancement	61,329 SF
Buffer Restoration	63,216 SF (includes buffer area modified following wetland creation actions)

# Site Map



## VICINITY MAP



SOURCE: BSR (ACCESSED 01/27/2025)



## APPLICANT/OWNER

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 BELLEVUE, WA 98004  
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 PHONE: (425) 417-6004  
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## LOCATION

THE NE ¼ OF SECTION 26,  
 TOWNSHIP 31N, RANGE 5E, WM

## ENVIRONMENTAL CONSULTANT

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## SHEET INDEX

SHEET	SHEET TITLE
M1.0	EXISTING CONDITIONS
M2.0	PROPOSED SITE PLAN & IMPACTS
M3.0	PROPOSED SITE PLAN & MITIGATION
M3.1	PLANT SCHEDULE
M4.0	DETAILS

## NOTES

1. SURVEY PROVIDED BY COMPANY, ADDRESS, PHONE NUMBER.
2. SITE PLAN PROVIDED BY LAND TECHNOLOGIES, INC. 19620 3RD AVE NE ARLINGTON WA 98223. 360-652-9727
3. SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



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Appendix B- Grading Plans

Appendix C – Qualifications

# Chapter 1. Existing Conditions

Soundview Consultants LLC (SVC) has been assisting MJS Investors (Applicant) with a conceptual mitigation plan for the proposed residential redevelopment of a 32.28-acre site located at 8014, 82288, 8210, and 8326 172<sup>nd</sup> Street Northeast within the City of Arlington, Washington (Figure 1). The subject property consists of five tax parcels situated in the Northeast ¼ of Section 26, Township 31 North, Range 05 East, W.M. (Snohomish County Tax Parcel Numbers 31052500200600, 31052600100100, 31052600100200, 31052600102200, and 31052600102300).

The subject property is located within a rural residential setting within the City of Arlington and is partially developed with four single-family residences, associated infrastructure, gravel driveways, and garages. Much of the site consists of open fields, lawn, and small pockets of deciduous trees and shrubs, with a larger forested area located on the southeast area of the subject property. The subject property abuts 172<sup>nd</sup> Street Northeast to the north, a single-family residence and undeveloped land to the east, undeveloped forested land and chicken farm facilities to the south, and single-family residences on large lots to the west. Topography on the site generally slopes from southeast to northwest with elevations ranging from approximately 408 feet above mean sea level (amsl) to 360 feet amsl. The subject property is within the Snohomish River Watershed (Water Resources Inventory Area 7).

**Figure 1. Subject Property.**



## 1.1 Critical Area Findings

SVC investigated the subject property and publicly accessible areas within 300 feet of the project area for potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in December of 2022 and April of 2024. Using current methodology, the site identified four potentially-regulated wetlands onsite (Wetlands A – D) and one stream (Stream Z) on the subject property. Additionally, one offsite wetland (Wetland 1) was identified offsite to the west within 300 feet of the subject property. AMC 20.93.800(a) has adopted the current wetland rating system for western Washington (Hruby and Yahnke 2023). Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that functions may be replaced, or in some cases improved. Category III wetlands include wetlands with moderate level of functions (scoring between 16 and 19 points) that have generally been disturbed in some ways and are often less diverse or more isolated in the landscape than Category II wetlands. Wetlands A and D are classified as Category IV wetlands, and Wetlands B, C, and 1 are classified as Category III wetlands with moderate habitat scores ranging from 6 to 7 points. Stream Z is classified as a Type Ns (non-fish habitat, seasonal) water.

No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species were identified within 300 feet of the subject property during the site investigations. Critical area findings are described in a *Wetland and Fish and Wildlife Habitat Assessment: Lindsay Annexation* report by SVC dated June 21, 2024.

## 1.2 Regulatory Considerations

### 1.2.1 Local Buffer Requirements

Per AMC 20.93.830(a) Table 20.93-4, wetland buffers are based on wetland category and the level of habitat functions. Category IV wetlands are subject to a standard 40-foot buffer regardless of habitat score. Category III wetlands with moderate habitat scores ranging from 6 to 7 points are subject to standard 110-foot buffer. Table 1 below summarize the standard buffer widths for the identified wetlands. Per AMC 20.93.830(1), for wetlands with habitat scores of 6 points or more, these buffer widths presume the implementation of a relatively undisturbed vegetated corridor at least 100 feet wide protected between the wetland and:

- i. A legally protected, relatively undisturbed and vegetated area (e.g., priority habitats, compensatory mitigation sites, wildlife areas/refuges, national, county, and state parks where they have habitat management plans with areas designated as natural, natural forest, or natural area preserve);
- ii. An area that is the site of a watershed project identified within, and full consistent with a watershed plan as defined by RCW 89.08.460;
- iii. An area where development is prohibited according to the provisions of the local shoreline master program; or
- iv. An area with equivalent habitat quality that has conservation status in perpetuity, in consultation with WDFW.

Additionally, for all wetlands, regardless of category, standard buffer widths require the implementation of minimization measures described in AMC 20.93.830(a) Table 20.93-5 (Table 2 below). An Existing Conditions Exhibit is provided on Sheet 1 of Appendix A.

**Table 1. Wetland Buffer Summary.**

Wetland	Category	Habitat Score	Standard Buffer Width (Feet)
A	IV	6	40
B	III	7	110
C	III	6	110
D	IV	5	40
1	III	6	110

**Table 2. Required Measures to Minimize Impacts to Wetlands**

Disturbance	Examples of Activities and Uses that Cause Disturbances	Required Measures to Minimize Impacts
<b>Lights</b>	<ul style="list-style-type: none"> <li>• Parking lots, warehouses, manufacturing, residential, parks</li> </ul>	<ul style="list-style-type: none"> <li>• Direct lights away from critical areas and buffers</li> <li>• Day use only regulations preventing the need for lights</li> <li>• Timer on lights</li> </ul>
<b>Noise</b>	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Residential</li> </ul>	<ul style="list-style-type: none"> <li>• Locate activity that generates noise away from wetlands</li> <li>• If warranted, enhance existing buffer with native vegetation planting adjacent to noise source</li> <li>• For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining establish an additional 10 ft heavily vegetated buffer strip</li> <li>• Seasonal limitations on hours of operation</li> </ul>
<b>Toxic runoff*</b>	<ul style="list-style-type: none"> <li>• Parking lots, roads, manufacturing, residential areas, application of agricultural pesticides, landscaping</li> </ul>	<ul style="list-style-type: none"> <li>• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</li> <li>• Establish covenants limiting use of pesticides within 150 feet of critical area or buffer</li> <li>• Apply integrated pest management</li> </ul>
<b>Stormwater runoff</b>	<ul style="list-style-type: none"> <li>• Parking lots, roads, manufacturing, residential areas, commercial, landscaping</li> </ul>	<ul style="list-style-type: none"> <li>• Retrofit stormwater detention and treatment for roads and existing adjacent development</li> <li>• Prevent channelized flow from lawns that directly enters the buffer</li> <li>• Use Low Intensity Development technique</li> </ul>
<b>Change in water regime</b>	<ul style="list-style-type: none"> <li>• Impermeable surfaces</li> <li>• Lawns</li> <li>• Tilling</li> <li>• Forest and forest duff removal</li> </ul>	<ul style="list-style-type: none"> <li>• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</li> <li>• Retain minimum forest and forest duff</li> </ul>
<b>Pets and human disturbance</b>	<ul style="list-style-type: none"> <li>• Residential areas and parks</li> </ul>	<ul style="list-style-type: none"> <li>• Use privacy fencing; plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion</li> <li>• Place wetland and its buffer in a separate tract or protect with a conservation easement</li> </ul>
<b>Dust</b>	<ul style="list-style-type: none"> <li>• Construction sites</li> </ul>	<ul style="list-style-type: none"> <li>• Use best management practices to control dust</li> </ul>

Disturbance	Examples of Activities and Uses that Cause Disturbances	Required Measures to Minimize Impacts
<b>Disruption of corridors or connections</b>	<ul style="list-style-type: none"> <li>Roads, residential, commercial, manufacturing, landscaping, stormwater</li> </ul>	<ul style="list-style-type: none"> <li>Maintain connection to offsite areas that are undisturbed</li> <li>Restore corridors or connections to offsite habitats by replanting</li> </ul>

\* These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.

In order to adopt the standard buffer widths described in AMC 20.93.830(a) Table 20.93-4, the greatest light and noise generating sources (such as internal access roads) associated with the proposed development will be located interior to the development away from critical areas to the greatest extent feasible. All new runoff will be collected in stormwater detention ponds and treated prior to being dispersed to wetland and stream buffers to retain existing site drainage patterns and hydrology. Protected corridors will be established where feasible onsite, maintaining accessibility between higher functioning habitat areas for local wildlife. Furthermore, critical areas signs and fencing will be installed along the boundaries of critical areas buffers to prevent intrusion.

Stream Z onsite is classified as a Type Ns (non-fish habitat, seasonal) water. Per AMC 20.93.730 Table 20.93-3, Type Ns waters are subject to a standard 50-foot buffer. Table 3 below summarizes the standard buffer width for Stream Z.

**Table 3. Stream Buffer Summary.**

Stream	Typing	Standard Buffer Width (feet)
Z	Type Ns	50

Per AMC 20.93.730(a), stream buffer widths shall be maintained on both sides of the stream channel and all existing native vegetation shall be preserved. The existing buffer areas associated with Stream Z onsite are degraded due to mowing, and the encroachment of non-native invasive species.

Per AMC 20.93.340 an additional 15-foot building setback is required from the edge of any critical area buffer.

### 1.2.2 State Regulations

All onsite wetlands and streams are regulated as surface waters of the state by the WSDOE under the Revised Code of Washington (RCW) 90.48.

### 1.2.3 Federal Regulations

On January 18, 2023, USACE and EPA published a revised definition of “Waters of the United States” (USACE and EPA, 2023a). The revised rule became effective on March 20, 2023. On May 25, 2023, the U.S. Supreme Court issued a decision affecting the definition of Waters of the United States, or “WOTUS”, in *Sackett Et Ux. V Environmental Protection Agency Et Al*. On August 29, 2023, the US EPA and USACE issued a final rule to amend the final “Revised Definition of ‘Waters of the United States’” rule. The amendment conforms the definition of “Waters of the United States” to the U.S. Supreme Court’s decision in the *Sackett Et Ux. V Environmental Protection Agency Et Al* case.

The 2023 revised and amended definition of Waters of the United States defines “adjacent” as “having a continuous surface connection.” The revised and amended definition of “Waters of the United States” is as follows:

*(a) Waters of the United States means:*

- (1) Waters which are: (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) The territorial seas; or (iii) Interstate waters;*
- (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;*
- (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;*
- (4) Wetlands adjacent to the following waters: (i) Waters identified in paragraph (a)(1) of this section; or (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;*
- (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section;*

*(b) The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:*

- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;*
- (2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;*
- (3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;*
- (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;*
- (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;*
- (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;*
- (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and*

*(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.*

Stream Z is a tributary to Edgecomb Creek, which connects into Middle Fork Quilceda Creek, a tributary to the main stem of Quilceda Creek which outlets directly to the Puget Sound, a regulated Water of the United States (WOTUS). As such, Stream Z is regulated as a WOTUS under Category (a)(3) above. Wetlands A - C and offsite Wetland 1 all share hydrological connections to the onsite ditches that outlet into Edgecomb Creek offsite to the west; thus Wetlands A - C and Wetland 1 are likely federally regulated wetlands under the CWA, and as such are likely regulated as WOTUS under category (a)(4). Wetland D is a small, isolated depression that lacks and outlet and therefore does not share a surface water connection with potential WOTUS and does not meet the criteria of an adjacent wetland under category (a)(4).

# Chapter 2. Proposed Project

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## 2.1 Purpose and Need

The purpose of the proposed project is to provide additional housing units within the City of Arlington to help alleviate the shortage of residences in the greater Seattle area.

## 2.2 Project Description

The Applicant proposes residential redevelopment of the subject property to include 167 single-family residences, internal site access and parking, open space areas, utilities, and stormwater facilities including several stormwater detention ponds that will disperse treated runoff to the outer portion of the wetland and stream buffer areas onsite to maintain existing site drainage patterns and hydrology.

The proposed residential development requires direct impacts to Wetland D and direct and indirect impacts to Wetlands A and C in order to provide a high-density residential development and associated infrastructure consistent with City development standards and the high capacity residential site zoning. Additionally, temporary and permanent impacts to the buffers of Wetlands A, B, and C, offsite Wetland 1, and Stream Z are required to support the construction of a walking trail and stormwater dispersion outfalls/trenches at a location that maintains existing site drainage patterns and hydrology. The project proposes to mitigate for these impacts through a combination of onsite wetland creation and enhancement, buffer creation, and restoration of all temporary impacts.

## 2.3 Site Planning

### 2.3.1 Mitigation Sequencing

Per AMC 20.93.740 and 20.93.840, adequate mitigation must be provided in order to avoid significant environmental impacts for activities where impacts to wetlands, streams, and/or associated buffers are unavoidable. What is considered adequate mitigation will depend on the nature and magnitude of the impact. According to AMC 20.93.100, “mitigation” is defined as avoiding, minimizing, or compensating for adverse critical area impacts in the following sequential order of preference:

- a. *Avoiding the impact altogether by not taking a certain action or parts of actions.*

The project was carefully designed to minimize impacts to critical areas to the greatest extent feasible by fully utilizing all developable upland areas onsite. However, due to the odd shape of the subject property which constrains the orientation of development, the spatial requirements needed to provide a high-density residential development and associated infrastructure consistent with City development standards and the high capacity residential zoning designation of the site, the extent of encumbrance by the identified critical areas and associated buffers throughout the site, complete avoidance is not feasible. In order to meet density requirements and standards for open space, site access, utilities, and stormwater facilities associated with the proposed residential development, the proposed project requires the necessary, unavoidable complete fill of Wetland D, as well as the partial fill of Wetlands A and C. Additionally, permanent and temporary impacts to the buffers of Wetlands A, B, and C, offsite Wetland 1, and Stream Z are necessary and unavoidable in order to provide pedestrian walking trails and stormwater dispersion outfalls/trenches necessary to maintained existing site drainage patterns and hydrology.

- b. *Minimize or limit the degree or magnitude of actions and their implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts.*

The proposed project was carefully designed to limit critical area impacts to the minimum necessary while providing the space necessary to support a high-density residential development and associated infrastructure and maintain existing site drainage patterns and hydrology. Direct wetland impacts are limited to the fill of one small (<200 square feet), isolated Category IV wetland (Wetland D), a portion of the lower functioning, Category IV wetland (Wetland A), and a portion of Wetland C that is degraded due mowing and the encroachment of non-native invasive species. Permanent impacts to the critical area buffers onsite are situated within the outer 25 percent of the buffers and are limited to the footprint of the proposed pedestrian trail. Remaining buffer impacts are limited to temporary impacts necessary for grading during trail construction and the installation of stormwater outfalls/dispersion trenches necessary to retain existing site drainage patterns and hydrology. All buffer impacts are located in portions of the critical areas buffers degraded by prior land clearing, mowing, and the encroachment of non-native invasive species. In addition to limiting all permanent and temporary impacts to low-functioning, degraded areas onsite, minimization measures outlined in AMC 20.93.830(a) Table 20.93-5 will be implemented. Furthermore, all appropriate best management practices (BMPs) and temporary erosion and sediment control (TESC) measures consisting of silt fencing, seeding of disturbed soils, and items outlined in the project's erosion and stormwater control plans, to be prepared by a Project Engineer prior to clearing and grading activities, will be implemented throughout the duration of project construction.

- c. *Rectifying the impact by repairing, rehabilitating, or restoring the affected Mitigate any impacts by repairing, rehabilitating, or restoring the affected environment.*

All temporary buffer impacts will be fully restored immediately following the completion of site grading to prevent erosion and sedimentation. Permanent direct impacts to Wetlands A, C, and D and permanent impacts to wetland and stream buffers cannot be rectified. Indirect impacts to Wetlands A and C will ultimately transition to function as wetland buffer. Areas indirectly impacted by the proposed development consist of degraded areas impacted by prior land clearing, mowing, and the encroachment of non-native invasive species. These wetland areas will be enhanced with native vegetation to improve habitat and screening between the remainder of the wetlands and the proposed development, improving existing onsite wetland functions.

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

The proposed direct and indirect wetland impacts are the result of permanent actions that cannot be reduced or eliminated over time. However, additional potential impacts to critical areas will be reduced over time through a combination of buffer and wetland enhancement activities which will include densely planting targeted, degraded areas with appropriate native vegetation. Furthermore, appropriate fencing and critical areas signs will be posted to discourage intrusion into the critical areas and associated buffers consistent with the requirements of AMC 20.93.290.

- e. *Compensating for the impact by replacing, enhancing or providing substitute resources or environments.*

Direct impacts to Wetlands A, C, and D, indirect impacts to Wetlands A and C, and permanent impacts to the onsite wetland and stream buffer areas will be compensated through a combination of onsite, in-kind wetland creation and enhancement and buffer creation and enhancement actions. The proposed onsite mitigation actions aim to establish higher functioning wetland habitat, improve screening and habitat between the identified critical areas and the proposed development, and, where feasible, establish protected corridors maintaining connectivity accessibility between onsite critical areas. It is anticipated that these measures will achieve a net positive ecological benefit onsite and in the greater Snohomish River watershed, and exceed the mitigation ratios establish in AMC 20.93.840(d) Table 20.93-7 to ensure no net loss of wetland or critical area buffer functions onsite.

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

The wetland creation and enhancement areas and buffer creation and restoration areas will be maintained and monitored for a period of 10 years to ensure the success of mitigation actions, consistent with the requirements of AMC 20.93.850 and interagency guidance (WSDOE et al., 2021). Appropriate contingency measures will be implemented if monitoring indicates that the goals and performance standard of the mitigation plan are not being met.

### **2.3.2 Mitigation Requirements – Streams and Surface Water Features**

Per AMC 20.93.740(a), in order to avoid significant environmental impacts for those activities not regulated by the Shoreline Master Program and allowed pursuant to Section 20.93.720, the applicant for a land use or development permit will select one or more of the following mitigation actions, listed in order of preference:

1. *On-site environmentally critical area restoration/improvement—Restoration or improvement in functional value of degraded on-site waterways and/or their buffers at a two to one ratio (two square feet for every one square foot impacted).*
2. *On-site ECA/Creation—Creation of on-site waterways and their buffers at a two to one ratio (two square feet for every one square foot impacted).*
3. *On-site ECA buffer restoration—Restoration or improvement in functional value of degraded on-site waterway buffers at a ratio of six to one.*

As mentioned in the mitigation sequencing (Section 2.3.1) described above, the proposed project requires necessary, unavoidable permanent impacts to the buffer of Stream Z to support the construction of a pedestrian trail and stormwater dispersion outfalls/trenches at a location that will maintain existing site drainage patterns and hydrology. Additional temporary impacts are also necessary for site grading and the construction of these facilities. The portions of the Stream Z buffer proposed to be impacted consist entirely of herbaceous areas degraded by mowing and the encroachment of non-native invasive species. Overall, approximately 2,467 square feet of buffer impacts are anticipated across the site, which will be offset through 9,164 square feet of buffer creation, exceeding a 2:1 ratio. Additionally, all temporary impacts will be fully restored immediately after construction is completed. With the implementation of buffer creation and restoration actions, no net loss of stream buffer functions is anticipated.

### **2.3.3 Activities Allowed in Wetland Buffers**

The proposed project requires permanent impacts to the buffers of Wetlands A, B, and C, and offsite Wetland 1 to support the construction of a pedestrian pathway and stormwater

outfalls/dispersion trenches at locations that maintain existing site drainage patterns and hydrology. Per AMC 20.93.820(3), the following activities may be permitted in wetland buffers:

*(A) Activities having minimal adverse impacts on buffers and no adverse impacts on regulated wetlands. These may include low intensity, passive recreational activities such as low impact trails in the outer twenty-five percent, non-permanent wildlife watching blinds, short-term scientific or educational activities, and sports fishing;*

The proposed pedestrian trail is a low impact development activity that is located in the outer 25-percent of the buffers of Wetlands A, B, and C, offsite Wetland 1, and Stream Z. Permanent buffer impacts, totaling 2,467 square feet, are limited to the footprint of the trail and will be offset through onsite buffer creation exceeding a 1:1 ratio. Temporary impacts from grading during the construction of the trail will be fully restored immediately after construction is complete. All temporary and permanent impacts are located in portions of the wetland buffers already degraded due to prior land clearing, mowing, and the encroachment of non-native invasive species.

*(B) With respect to Category III and IV wetlands, stormwater management facilities having no reasonable alternative on-site location; or*

The proposed stormwater dispersion outfalls/trenches are located within the buffers of Category III and IV wetlands; and the locations are necessary to maintain existing site drainage patterns and hydrology. Impacts associated with these features will be limited to temporary buffer impacts during construction/installation, which will be fully restored immediately after site development is complete. All stormwater will undergo enhanced water quality treatment prior to being dispersed to wetland buffers, and wetland buffer enhancement is proposed to establish a dense native plant community to further disperse and remove pollutants from runoff before it reaches the wetlands.

*(C) With respect to Category III and IV wetlands, development having no feasible alternative location when the following conditions have been met: Impacts are the minimum necessary; Buffer impacts are mitigated through buffer averaging.*

No further impacts to wetland buffers are proposed onsite.

### **2.3.4 Mitigation Requirements – Wetlands**

Per AMC 20.93.840, in order to avoid significant environmental impacts, the applicant for a land use or development permit shall compensate for unavoidable wetland impacts, listed in order of preference. What is considered adequate mitigation will depend on the nature and magnitude of the potential impact.

- 1. On-site wetlands restoration/improvement—Restoration or improvement in functional value of degraded on-site wetlands and/or their buffers at the ratio listed in Table 20.93-7 according to the wetland type.*
- 2. On-site wetlands creation—Creation of on-site wetlands and their buffers at the ratio listed in Table 20.93-7 according to the wetland type.*
- 3. On-site wetlands buffer restoration—Restoration or improvement in functional value of degraded on-site wetland buffers at the ratio listed in Table 20.93-7 according to the wetland type.*

4. *Off-site wetlands protection—Where on-site protection is not possible, dedicate an exclusive easement for the protection of equivalent (in ecological type and function) wetland and its buffer on an off-site wetland at the ratio listed in Table 20.93-7 according to the wetland type. The location of any off-site wetland mitigation area shall be located within the same watershed as the impact and as near to the site as possible, following this preferred order:*
  - A. *Contiguous to the impacted wetland,*
  - B. *Within the same drainage basin where it would best provide the same function as the impacted wetland,*  
*and*
  - C. *Elsewhere within the city.*

Compensatory mitigation for necessary, unavoidable direct and indirect wetland impacts will be provided through onsite, in kind wetland creation in order to meet the mitigation ratios specified under AMC 20.93.840(d) Table 20.93-7 and ensure no net loss of wetland functions onsite. Additional wetland and wetland buffer enhancement are also proposed in order to improve existing degraded critical areas functions onsite; however, wetland creation was determined to be more adequate to compensate for lost wetland functions due to the ratios required for enhancement to offset wetland impacts and the ability to compensate for the net loss in wetland area through wetland creation.

## 2.4 Description of Impacts

### 2.4.1 Wetland Impacts

The proposed project requires the necessary and unavoidable complete fill of Wetland D, and partial fill of Wetlands A and C (11,399 square feet of wetland fill total). Additionally, the partial fill of Wetlands A and C will result in 12,003 square feet of indirect wetland impacts. Wetland functions for the wetlands proposed to be impacted have been assessed using the *2014 Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023). The wetland functions are summarized, and the wetland rating forms are provided in the *Wetland and Fish and Wildlife Habitat Assessment Report: Lindsay Annexation* (SVC, 2024). The proposed project will result in a complete loss of functions provided by total fill of Wetland D and partial loss of functions provided by partial fill of Wetlands A and C. A summary of wetland impacts is provided in Table 4. The proposed site plan and impacts are depicted on Sheet 2 of Appendix A.

- Wetland A: Wetland A is a Palustrine Emergent, Seasonally Saturated slope wetland. The proposed fill will result in the partial loss of these areas, as well as indirect impacts to additional areas that will transition to function as buffer. The portions of Wetland A proposed to be filled are degraded due to mowing, the encroachment of non-native invasive species, and the lack of native shrub and tree cover. The remaining portions of Wetland A outside of the proposed fill will continue to be representative of the existing Cowardin classes and hydroperiods.
- Wetland C: Wetland C is a Palustrine Emergent, Seasonally Saturated and Flooded depressional wetland. The proposed wetland fill will result in the partial loss of these areas, as well as indirect impacts to additional areas that will transition to function as buffer. The portions of Wetland C proposed to be filled are degraded due to mowing, the encroachment of non-native invasive species, and the lack of native shrub and tree cover. The remaining portions of Wetland C outside of the proposed fill will continue to be representative of the existing Cowardin classes and hydroperiods.

- Wetland D: Wetland D is a Palustrine Scrub-Shrub/Emergent, Seasonally Saturated depressional wetland. The proposed wetland fill will result in the complete loss of all associated wetland functions.

**Table 4. Summary of Wetland Impacts**

Wetland	HGM	Cowardin <sup>1</sup>	WSDOE Ratings <sup>2</sup>	Onsite Wetland Area	Impact Type	Impact Area
A	Slope	PEMB	IV	22,644 SF (0.52 ac)	Direct (fill)	1,499 SF (0.034 ac)
C	Depressional	PEMBC	III	29,723 SF (0.68 ac)	Direct (fill)	9,783 SF (0.225 ac)
D	Depressional	PSS/EMBC	IV	117 SF (0.003 ac)	Direct (fill)	117 SF (0.003 ac)
<b>Total Direct Wetland Impacts</b>						<b>11,399 SF (0.262 ac)</b>
A	Slope	PEMB	IV	22,644 SF (0.52 ac)	Indirect	690 SF (0.016 ac)
C	Depressional	PEMBC	III	29,723 SF (0.68 ac)	Indirect	11,313 SF (0.260 ac)
<b>Total Indirect Wetland Impacts</b>						<b>12,003 SF (0.276 ac)</b>

1. Current WSDOE rating system (Hruby and Yahnke 2023) per AMC 20.93.800.
2. Federal Geographic Data Committee (2013); class based on vegetation: PSS = Palustrine Scrub-Shrub; PEM = Palustrine Emergent. Modifiers for Water Regime or Special Situations: B = Seasonally Saturated; C= Seasonally Flooded.

## 2.4.2 Buffer Impacts

The proposed project requires 2,467 square feet of permanent impacts to the buffers of Wetlands A, B, and C, offsite Wetland 1, and Stream Z, as well as 61,374 square feet of additional temporary buffer impacts associated with site grading, the construction of a pedestrian trail, and the construction/installation of stormwater outfalls/dispersion trenches. These impacts will primarily result in the loss of herbaceous areas already degraded due to mowing and the encroachment of non-native invasive species. All temporary impacts will be fully restored by replanting native vegetation.

## 2.5 Authorizations

Proposed wetland impacts will require coordination and authorization from local, state, and federal agencies. The Applicant will apply for federal authorization under Section 404 of the CWA through Nationwide Permit (NWP) #29 – Residential Developments and will also require state authorization from WSDOE for Section 401 of the CWA through a Water Quality Certification and compliance with the Coastal Zone Management Program. Additionally, direct and indirect wetland impacts and buffer impacts will require coordination and authorization from the local agency (City of Arlington).

## Chapter 3. Final Mitigation Plan

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Project impacts and mitigation actions attempt to closely adhere to local critical areas regulations specified in AMC 20.93 while also utilizing the best available science (Granger et al., 2005; Hruby et al., 2009; WSDOE et al. 2006, and WSDOE et al., 2021). In general, compensatory mitigation should be located within the same watershed as the impact site and should be located where it is most likely to successfully replace lost functions and values that best benefit the impacted watershed. Compensatory wetland mitigation actions were examined in the context of both onsite and watershed processes to determine the most suitable wetland mitigation strategy.

Mitigation actions are intended to compensate for lost wetland functions and values by providing an overall improvement in the quality of water quality, hydrologic, and habitat functions according to the needs of the site, local sub-basin, and overall Snohomish River watershed. The project will provide onsite wetland creation to mitigate direct and indirect impacts to Wetlands A, C, and D. In addition, onsite wetland restoration, wetland enhancement, buffer restoration, buffer enhancement, and buffer creation will be provided to further improve onsite wetland functions and screening between the identified critical areas and the development. This chapter presents the mitigation details for the proposed residential development project.

The Applicant will submit any proposed substantial changes to the project or mitigation plan, such as significant changes to the amount, location, or design of mitigation; the goals, benchmarks, or performance standards; the monitoring or adaptive management provisions, to WSDOE for review and approval prior to implementation. Minor changes, such as alterations to the species listed in the planting plan, will be documented in the as-built report.

### 3.1 Mitigation Strategy

#### 3.1.1 Wetland Mitigation Strategy

The onsite mitigation actions are anticipated to compensate for the proposed direct and indirect wetland impacts through 47,347 square feet (1.087 acre) of compensatory wetland creation which will expand remaining portions of Wetland A on the southern portion of the subject property further west onsite. The compensatory wetland creation is designed according to local, state, and federal rules and guidance, and the mitigation ratios established in AMC 20.93.840(d) Table 20.93-7 and joint state and federal agency guidance (WSDOE et al., 2021). The area of calculations for the compensatory mitigation area are summarized in Table 2 below. In addition to the proposed compensatory wetland creation, the remaining portions of Wetland A adjacent to the wetland creation area, totaling 20,455 square feet (0.470 acre) will be fully restored, and portions of Wetland C degraded by mowing, totaling 19,938 square feet (0.456 acre) will be enhanced to further offset the loss of functions provided by the wetlands proposed to be filled and provide a net gain in wetland area and functions onsite.

**Table 5. Compensatory Wetland Mitigation Summary for Wetland Impacts**

Wetland	WSDOE Rating <sup>1</sup>	Impact Type	Impact Area (acre)	Compensation	
				Creation/Re-Establishment Ratio	Area (acre)
A	IV	Direct	0.034	1.5:1	0.051
A	IV	Indirect	0.016	0.75:1 <sup>2</sup>	0.012
C	III	Direct	0.225	2:1	0.450
C	III	Indirect	0.260	1:1 <sup>2</sup>	0.260
D	III	Direct	0.003	1.5:1	0.004
<b>Total Compensatory Wetland Creation Required:</b>					<b>0.777</b>
<b>Total Wetland Creation Proposed:</b>					<b>1.087</b>

Notes:

1. WSDOE rating according to Washington State wetland rating system for Western Washington (Hruby and Yahnke, 2023).
2. Indirect impacts are mitigated at one half the standard mitigation ratio for direct wetland impacts (WSDOE et al, 2021).

The wetland creation area will be located on the southern portion of the subject property, adjacent to/expanding the western boundary of Wetland A. The wetland mitigation area has been designed to ensure the created wetland area will be protected by a minimum of a 110-foot “perimeter buffer”. According to local and joint state and federal guidance (WSDOE et al, 2021), Category III wetlands adjacent to high intensity land uses should have a protective 150-foot perimeter buffer. However, per AMC 20.93.830(a)(1), a 110-foot buffer associated with moderate land use impacts may be implemented when a relatively undisturbed vegetated corridor at least 100-feet wide is maintained between the wetland and any other protected areas, and minimization measures described in AMC 20.93.830 Table 20.93-5 are implemented. These measures will be enacted onsite to allow for a 110-foot perimeter buffer surrounding the wetland creation area. Currently, the area surrounding the wetland creation area consists of herbaceous plants and areas degraded due to mowing, the encroachment of non-native invasive species, and lack of native trees and shrubs. Following development, the wetland creation area will be situated in a protected corridor with Wetlands A, B, and C on a site developed with a high-density residential plat that meets the criteria of a high intensity land use. Portions of the 110-foot perimeter buffer dominated by non-native invasive species and will be enhanced with native plantings (see section 3.1.2 below) to increase buffer functions surrounding the wetland creation site. The wetland creation site will be further protected by the establishment of a protective easement or tract surrounding the wetland creation area and surrounding the existing wetlands and streams forming a connected corridor on the western portion of the subject property.

The goal of the proposed compensatory wetland creation is to create a larger, higher functioning forested and/or scrub-shrub depressional wetland on the southern portion of the subject property by expanding Wetland A. The existing wetland areas proposed to be impacted onsite consist of predominantly emergent slope/depressional wetlands with areas of seasonal flooding and saturation that are partially degraded by mowing and the encroachment of non-native invasive species. Furthermore, Wetland D is isolated in the landscape. As such, the proposed wetland creation area adjacent to Wetland A will provide an increase in wetland functions onsite.

The wetland creation areas will be excavated from uplands west of Wetland A. At a minimum, the excavation should achieve a water table within twelve inches of the soil surface during the early growing season for at least two consecutive weeks. Topography throughout the wetland creation area will be varied to improve the diversity of hydroperiods in the landscape. In order to ensure adequate hydrology is achieved throughout the wetland creation area, existing drainage patterns will need to be modified. Portions of the ditch separating Wetlands A and B will be filled so that hydrology does not drain from Wetland B and leave the site before reaching the wetland creation area. The wetland creation area will be constructed with an outlet that maintains existing drainage to the ditch and Stream Z further downgradient, however, the outlet will incorporate a beaver dam analog to slow runoff leaving the creation area and provide an additional mechanism to sustain wetland hydrology. Organic topsoil can be added to the wetland creation site as needed to provide a suitable substrate for native plantings; topsoil may be sourced from onsite or an approved offsite supplier.

Through careful design and utilization of best available science, the mitigation plan has a high probability of success and persistence. The newly created wetland area will be installed in the same environment as the existing wetlands and drainage patterns in the landscape will be modified to ensure adequate hydrology to the wetland creation area. The wetland creation area will be planted with a variety of native tree, shrub, and groundcover species selected based on species wetland indicator statuses, targeted hydroperiods, local topography, and species currently present in the existing onsite wetland areas. By following the site preparation specifications outlined herein (e.g., excavation, topsoil installation as needed, and plantings), the wetland creation area will be able to maintain wetland hydrology during the growing season in most years to match the existing hydrologic regimes of the wetland areas proposed to be impacted and to provide functional wetland habitat.

In addition to the proposed wetland creation actions, the entirety of Wetland A will be restored, and targeted areas in Wetland C that are currently degraded due to mowing and the encroachment of non-native invasive species will be enhanced. Restoration actions in Wetland A will include removing fill material left behind during the excavation of the east-adjacent ditch and restoring historic grades to tie into the wetland creation area and help facilitate the flow of runoff towards the wetland creation area. Within both the wetland restoration and enhancement area, non-native invasive species will be removed and areas will be replanted with a dense assortment of native trees, shrubs, and groundcover to improve existing wetland functions onsite. Overall, the proposed wetland creation, wetland restoration, and wetland enhancement actions are anticipated to provide a net lift in wetland functions onsite when compared to the existing, degraded wetland areas proposed to be impacted by improving horizontal and vertical plant diversity which will improve opportunities for browsing, cover, and nesting, and by increasing plant density which will slow and attenuate surface runoff, improving water quality and hydrologic functions.

### **3.1.2 Buffer Mitigation Strategy**

In order to offset 2,467 square feet of permanent wetland and stream buffer impacts, 9,164 square feet of buffer will be created onsite. Additionally, targeted buffer areas (totaling 61,329 square feet) that are currently degraded due to mowing, the encroachment of non-native invasive species, and largely lacking native tree and shrub cover, will be enhanced, and buffer areas temporarily impacted during construction (totaling 63,216 square feet) will be fully restored. Throughout the buffer creation, buffer enhancement, and buffer restoration areas, non-native invasive species and other degradations (trash, debris, etc.) will be removed, and the areas will be densely planted with an assortment of native trees, shrubs, and groundcovers.

Providing native plantings within the buffer will enhance the habitat functions and critical area protection provided by the site, improve hydrology and quality of water leaving the project site, and increase buffer screening between the wetlands, Stream Z, and proposed development. Areas of established native vegetation will be retained. Overall, the proposed project will result in a net gain in ecological functions when compared to the existing degraded conditions of the existing wetland buffers.

### **3.1.3 Mitigation Recommendations**

The wetland creation, wetland restoration, wetland enhancement, buffer creation, buffer enhancement, and buffer restoration actions will include, but may not be limited to, the following recommendations:

- Pre-treat invasive plants within the wetland buffer areas with a Washington Department of Agriculture approved herbicide. After pre-treatment, grub to remove the invasive plants and replant all cleared areas with native trees, shrubs, and ground covers listed in the plan set. Pre-treatment of the invasive plants should occur a minimum of two weeks prior to removal;
- Excavate a wetland creation and restoration areas within/contiguous with Wetland A to a sufficient depth to hold wetland hydrology;
- Removal of all trash, refuse, and debris within the mitigation areas;
- Plant all mitigation areas with native trees, shrubs, and groundcovers listed in the plan set, or substitutes approved by the responsible Project Scientist, to help retain soils, filter stormwater, and increase biodiversity;
- Retention of established native vegetation where possible;
- An approved native seed mix will be used to seed the disturbed areas after planting;
- Maintain and control invasive plants annually, at a minimum, or more frequently if necessary. Maintenance to reduce the growth and spread of invasive plants is not restricted to chemical applications but may include hand removal, if warranted;
- Provide dry-season irrigation as necessary to ensure native plant survival;
- Direct exterior lights away from the critical areas wherever possible; and
- Place all activities that generate excessive noise (e.g., generators and air conditioning equipment) away from the remaining critical areas where feasible.

## **3.2 Approach and Best Management Practices**

Onsite mitigation actions will provide increased wetland functions and wetland and stream protections by the maintenance or improvement of wetland and wetland and stream buffer functions onsite. Mitigation actions should occur immediately after grading is complete. Temporary erosion and sediment control (TESC) measures will be implemented that consist of high-visibility fencing (HVF) installed around native vegetation along the reduced perimeter of the buffer, silt fencing between the graded areas and undisturbed buffer, plastic sheeting on stockpiled materials, and seeding of disturbed soils. These TESC measures should be installed prior to the start of development or mitigation actions and actively managed for the duration of the project.

All equipment staging and materials stockpiles shall be kept out of the critical areas and associated buffers, and the area will need to be kept free of spills and/or hazardous materials. All fill material for site preparation and road surfacing shall be sourced from upland areas onsite or from approved suppliers and will need to be free of pollutants and hazardous materials. Construction materials along

with all construction waste and debris shall be effectively managed and stockpiled on paved surfaces and kept free of the critical areas and buffers. Following completion of the development, the entire site shall be cleaned, and detail graded using hand tools wherever necessary, and TESC measures shall be removed.

### 3.3 Goals, Objectives, and Performance Standards

The goals and objectives for the onsite mitigation actions are based on replacing and improving onsite wetland and wetland and stream buffer functions impacted by the proposed project relative to existing conditions. These actions are capable of providing moderate to high levels of hydrologic, water quality, and habitat functions.

The goals, objectives, and performance standards are listed below. “Cover” is used in this Mitigation Plan to mean the proportion of the ground surface that is covered by vegetation when viewed from above. Native recruits will be utilized in assessing performance standards unless otherwise specified for a particular performance standard. Dead or dying plants may be replaced, and replacement plants may be utilized in assessing performance standards, unless otherwise specified for a particular performance standard.

**Goal 1** – Compensate for the loss of 11,399 square feet of wetlands and 12,003 square feet of indirect wetland impacts by creating a minimum of 47,347 square feet of wetland area that provides a moderate level of habitat functions.

**Objective 1.1** – Establish a minimum of 47,347 square feet of wetland creation area contiguous with the western boundary of Wetland A.

**Performance Standard 1.1.1** – The wetland creation area will measure at least 47,347 square feet in size as demonstrated by wetland delineations in Year 5 and Year 10. The wetland area will be delineated using the *1987 Army Corps of Engineers Delineation Manual and the 2010 Western Mountains, Valleys, and Coast Regional Supplement, Version 2*.

**Performance Standard 1.1.2** – In at least 5 out of the 10 monitoring years, the wetland creation area will have surface water or a water table or saturation within 12 inches of the soil surface for a minimum of 14 consecutive days during the growing season. Wetland hydrology will be assessed through soil pits and/or direct observations.

**Objective 1.2** – Establish forested, scrub-shrub, and emergent wetland habitat within the wetland creation area with diverse horizontal and vertical vegetation structure and species richness to provide habitat for wetland-associated wildlife.

**Performance Standard 1.2.1** – At the end of Year 1, minimum plant survivorship within the wetland creation areas will be at 100 percent of the number of installed trees and shrubs (replacement of lost plants allowed). Native volunteer species may be included in the count.

**Performance Standard 1.2.2** – Native woody vegetation in the wetland creation area will provide at least 20 percent cover by Year 3, at least 30 percent cover by Year 5, at least 50 percent cover by Year 7, and 75 percent cover by Year 10.

**Performance Standard 1.2.3** – In all monitoring years, the wetland creation areas will have at least 2 species of native trees and 3 species of native shrubs.

**Objective 1.3** – Effectively control and/or eliminate non-native invasive species from the wetland creation area.

**Performance Standard 1.3.1** – Non-native, invasive plants (excluding reed canary grass) will not make up more than 20 percent cover during all monitoring years. Non-native, invasive plants are plants listed by the Washington State Noxious Weed Board.

**Performance Standard 1.3.2** – Reed canary grass cover will be reduced compared to baseline conditions established immediately prior to the mitigation actions: 15 percent reduction below baseline cover by Year 5, and 30 percent reduction below baseline by Year 10.

**Performance Standard 1.4.3** – State-listed, Class-A noxious weeds, purple loosestrife (*Lythrum salicaria*), and all non-native knotweeds and hybrids, and hybrids including *Polygonum cuspidatum*, *P. polystachyum*, *P. sachalinense*, *P. bohemicum*, etc. will be eradicated from the wetland creation area during all monitoring years.

**Goal 2** – Restore a minimum of 21,145 square feet of Wetland A adjacent to the wetland creation area to provide a moderate level of habitat functions.

**Objective 2.1** – Increase native woody plant cover within the wetland restoration area to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

**Performance Standard 2.1.1** – At the end of Year 1, minimum plant survivorship within the wetland restoration area will be at least 100 percent of the number of installed trees and shrubs.

**Performance Standard 2.1.2** – Native woody vegetation in the wetland restoration area will provide at least 20 percent cover by Year 3, at least 30 percent cover by Year 5, at least 50 percent cover by Year 7, and 75 percent cover by Year 10.

**Performance Standard 2.1.3** – In all monitoring years, the wetland enhancement areas will have at least 2 species of native trees and 3 species of native shrubs.

**Objective 2.2** – Effectively control non-native invasive species within the wetland enhancement areas.

**Performance Standard 2.2.1** – Non-native invasive plants, excluding reed canarygrass, will not make up more than 20 percent cover during all monitoring years. Non-native invasive plants are plants listed by the Washington State Noxious Weed Board.

**Performance Standard 2.2.2** – During all monitoring years, Reed canary grass cover will not exceed the baseline percent cover established during Year 0 (As-Built).

**Performance Standard 1.2.3** – State-listed, Class-A noxious weeds, purple loosestrife (*Lythrum salicaria*), and all non-native knotweeds and hybrids, and hybrids including

*Polygonum cuspidatum*, *P. polystachyum*, *P. sachalinense*, *P. bohemicum*, etc. will be eradicated from the wetland enhancement area during all monitoring years.

**Goal 3**– Enhance a minimum of 19,938 square feet of Wetland C to provide a moderate level of habitat functions.

**Objective 3.1**– Increase native woody plant cover within the wetland enhancement areas to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

**Performance Standard 3.1.1** – At the end of Year 1, minimum plant survivorship within the wetland enhancement area will be at least 100 percent of the number of installed trees and shrubs.

**Performance Standard 3.1.2** – Native woody vegetation in the wetland enhancement area will provide at least 20 percent cover by Year 3, at least 30 percent cover by Year 5, at least 50 percent cover by Year 7, and 75 percent cover by Year 10.

**Performance Standard 3.1.3** – In all monitoring years, the wetland enhancement areas will have at least 2 species of native trees and 3 species of native shrubs.

**Objective 3.2** – Effectively control non-native invasive species within the wetland enhancement areas.

**Performance Standard 3.2.1** – Non-native invasive plants, excluding reed canarygrass, will not make up more than 20 percent cover during all monitoring years. Non-native invasive plants are plants listed by the Washington State Noxious Weed Board.

**Performance Standard 3.2.2** – During all monitoring years, Reed canary grass cover will not exceed the baseline percent cover established during Year 0 (As-Built).

**Performance Standard 3.2.3** – State-listed, Class-A noxious weeds, purple loosestrife (*Lythrum salicaria*), and all non-native knotweeds and hybrids, and hybrids including *Polygonum cuspidatum*, *P. polystachyum*, *P. sachalinense*, *P. bohemicum*, etc. will be eradicated from the wetland enhancement area during all monitoring years.

**Goal 4** – Enhance 138,152 square feet of buffer (which includes 9,164 square feet of buffer creation to offset 2,467 square feet of permanent buffer impacts) and improve onsite buffer functions by creating native woody plant communities.

**Objective 4.1**– Establish 138,152 square feet of buffer enhancement/restoration areas that are vegetated with native woody plant cover to create diverse horizontal and vertical vegetation structure and wildlife habitat.

**Performance Standard 4.1.1** – At the end of Year 1, minimum plant survivorship within the buffer mitigation areas will be at least 100 percent of the number of installed trees and shrubs.

**Performance Standard 4.1.2** – Native woody vegetation in the wetland buffer mitigation areas will provide at least 20 percent cover by Year 3, at least 30 percent cover by Year 5, at least 50 percent cover by Year 7, and 75 percent cover by Year 10.

**Performance Standard 4.1.3** – In all monitoring years, the buffer mitigation areas will have at least 2 native tree species and 4 native shrubs species.

**Objective 4.2**– Effectively control and/or eliminate non-native invasive species in the buffer enhancement areas.

**Performance Standard 4.2.1** – Non-native invasive plants (excluding reed canary grass) will not make up more than 20 percent cover during all monitoring years. Non-native invasive plants are plants listed by the Washington State Noxious Weed Board.

**Performance Standard 4.2.2** – During all monitoring years, Reed canary grass cover will not exceed the baseline percent cover established during Year 0 (As-Built).

**Performance Standard 4.2.3** – State-listed, Class-A noxious weeds, purple loosestrife (*Lythrum salicaria*), and all non-native knotweeds and hybrids, and hybrids including *Polygonum cuspidatum*, *P. polystachyum*, *P. sachalinense*, *P. bohemicum*, etc. will be eradicated from the buffer enhancement area during all monitoring years.

### 3.4 Plant Materials and Installation

#### Plant Materials

All plant materials to be used for mitigation actions shall be nursery grown stock from a reputable, local source. Only native species are to be used; no hybrids or cultivars shall be allowed. Plant material provided will be typical of their species or variety; if not cuttings they will exhibit normal, densely developed branches and vigorous, fibrous root systems. Plants shall be sound, healthy, vigorous plants free from defects, and all forms of disease and infestation.

Container stock shall have been grown in its delivery container for not less than six months but not more than two years. Plants shall not exhibit rootbound conditions. Under no circumstances shall container stock be handled by their trunks, stems, or tops. Seed mixture used for hand or hydroseeding shall contain fresh, clean, and new crop seed mixed by an approved method. The mixture is specified in the plan set.

All plant material shall be inspected by the Project Scientist upon delivery. Plant material not conforming to the specifications below shall be rejected and replaced by the planting contractor. Rejected plant materials shall be immediately removed from the site.

Fertilizer shall be in the form of Agriform plant tabs or an approved like form. Mulch shall consist of sterile wheat straw for seeded areas (if necessary) and clean recycled wood chips approximately ½-inch to 1-inch in size and ½-inch thick for woody plants. The mulch material may be sourced from non-invasive woody materials sourced from the land clearing activities.

#### Plant Scheduling, Species, Size, and Spacing

Plant installation shall occur as close to conclusion of the construction activities as possible to limit erosion and limit the temporal loss of function provided by the wetlands, stream and buffers. All planting will occur between September 1 and May 1 to ensure plants do not dry out after installation, or temporary irrigation measures may be necessary.

#### Quality Control for Planting Plan

All plant material shall be inspected by the qualified Project Scientist upon delivery. Plant material not conforming to the specifications above will be rejected and replaced by the planting contractor. Rejected plant materials shall be immediately removed from the site. Under no circumstances shall container stock be handled by their trunks, stems, or tops.

The landscape contractor shall provide the responsible Project Scientist with documentation of plant material that includes the supplying nursery contact information, plant species, plant quantities, and plant sizes.

#### Product Handling, Delivery, and Storage

All seed and fertilizer shall be delivered in original, unopened, and undamaged containers showing weight, analysis, and name of manufacturer. This material shall be stored in a manner to prevent wetting and deterioration. All precautions customary in good trade practice shall be taken in preparing plants for moving. Workmanship that fails to meet industry standards will be rejected. Plants will be packed, transported, and handled with care to ensure protection against injury and from drying out. If plants cannot be planted immediately upon delivery they shall be protected with soil, wet peat moss, or in a manner acceptable to the responsible Project Scientist. Plants, fertilizer, and mulch not installed immediately upon delivery shall be secured on the site to prevent theft or tampering. No plant shall be bound with rope or wire in a manner that could damage or break the branches. Plants transported on open vehicles should be secured with a protective covering to prevent windburn.

#### Preparation and Installation of Plant Materials

The planting contractor shall verify the location of all elements of the mitigation plan with the responsible Project Scientist prior to installation. The responsible Project Scientist reserves the right to adjust the locations of landscape elements during the installation period as appropriate. If obstructions are encountered that are not shown on the drawings, planting operations shall cease until alternate plant locations have been selected by and/or approved by the Project Scientist.

Circular plant pits with vertical sides will be excavated for all container stock. The pits should be at least 1.5 times the width of the rootball, and the depth of the pit should accommodate the entire root system.

Broken roots shall be pruned with a sharp instrument and rootballs shall be thoroughly soaked prior to installation. Set plant material upright in the planting pit to proper grade and alignment. Water plants thoroughly midway through backfilling and add Agriform tablets. Water pits again upon completion of backfilling. No filling shall occur around trunks or stems. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water and install a 4- to 6-inch layer of mulch around the base of each container plant.

#### Temporary Irrigation Specifications

While the native species selected for mitigation actions are hardy and typically thrive in northwest conditions and the proposed actions are planned in areas with sufficient hydroperiods for the species selected, some individual plants might perish due to dry conditions. Therefore, irrigation or regular watering may be provided as necessary for the duration of the first two growing seasons, two times per week while the native plantings become established. If used, irrigation will be discontinued after two growing seasons. Frequency and amount of irrigation will be dependent upon climatic conditions and may require more or less frequent watering than two times per week.

### Invasive Plant Control and Removal

Invasive species onsite to be removed include Himalayan blackberry, reed canarygrass, and any listed noxious weeds or other invasive species that are existing or may colonize the mitigation area. These species are found nearby; therefore, to ensure these species do not expand following the mitigation actions, invasive species within the mitigation areas will be pretreated with a root-killing herbicide approved for use in aquatic sites (e.g., e.g. Glyphosate 5.4 containing herbicide) a minimum of two weeks prior to being removed from the wetland and stream buffers. The pre-treatment with herbicide shall occur prior to all planned mitigation actions, and spot treatment of any surviving other invasive vegetation should be performed again each fall prior to leaf senescence for a minimum of three years.

### **3.5 Maintenance & Monitoring Plan**

Conceptual Maintenance and Monitoring Plans are described below in accordance with AMC 20.93.390, and anticipated conditions from other regulatory agencies. The Applicant is committed to compliance with the mitigation plan and overall success of the project. As such, the Applicant will continue to maintain the mitigation areas, keeping the site free from of non-native invasive vegetation, trash, and yard waste.

The mitigation actions will require continued monitoring and maintenance to ensure the mitigation actions are successful. Therefore, the mitigation areas will be monitored for a period of ten years, with formal inspections by a qualified Project Scientist. Monitoring events will be scheduled at the time of construction, 30 days after planting, and minimally on an annual basis during Years 1, 2, 3, 5, 7, and 10. Closeout monitoring will also occur in Year 10. Delineation of compensatory wetland creation areas by a qualified Wetland Scientist will be conducted in Years 5 and 10 to ensure the success of the compensatory actions. Wetland delineations will be conducted in accordance with the *1987 Army Corps of Engineers Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2) (USACE, 2010).

Monitoring will consist of percent cover measurements and stem counts at permanent monitoring stations, walk-through surveys to identify invasive species presence and dead or dying enhancement plantings, photographs taken at fixed photo points, wildlife observations, and general qualitative habitat and wetland function observations. Data collected during monitoring visits will be appropriate for the performance standards of the relevant monitoring year. The permanent monitoring stations will be established such that the mitigation site is representatively sampled. Circular sample plots, approximately 30 feet in diameter (706 square feet), will be centered at each monitoring station. Sample plots will be located entirely within the proposed mitigation site. Sample plot shapes may need to be adjusted to ensure that sample plots do not cross the mitigation site boundaries; adjusted sample plot shapes should maintain the same area as the 30-foot-diameter circular sample plots. Mean survivorship and percent cover measurements from the sample plots will be used to estimate survivorship and percent cover across the mitigation site.

To determine survivorship, individual tree and shrub stems within the relevant circular sampling plots will be counted. Plants which grow several stems from a single base will be counted as one individual plant. These trees and shrubs will then be recorded as dead/dying or alive. To determine percent cover and species richness of woody vegetation, each species of tree or shrub within the approximately 30-foot-diameter circular sampling plots will be recorded and identified as native or invasive. Plants may be recorded by genus if species is unable to be determined at the time of the monitoring visit. Herbaceous vegetation will be sampled from a 10-foot diameter (78.5 square feet), established at the same location as the center of each tree and shrub sample plot. Herbaceous vegetation within the sampling plot will be recorded to at least the genus level and identified as native or invasive. A list of observed tree, shrub, and herbaceous genera or species, cover estimates, and wetland indicator status will be included within each monitoring report.

### **3.6 Reporting**

Following construction, an as-built report will be submitted to the City of Arlington, WSDOE, and the USACE within 30 days. The as-built report will include photographs of the mitigation site upon completion. Additionally, a brief monitoring report detailing the current ecological status of the wetland creation and enhancement and the buffer creation and enhancement actions, measurement of performance standards, and management recommendations will be prepared and submitted to the City of Arlington, WSDOE, and USACE by October 31<sup>st</sup> of each monitoring year.

### **3.7 Contingency Plan and Long Term Management**

If monitoring results indicate that performance standards are not being met, it may be necessary to implement all or part of the contingency plan. Careful attention to maintenance is essential in ensuring that problems do not arise. Should any portions of the mitigation areas fail to meet the success criteria, a contingency plan will be developed and implemented with Agency approval. Such plans are adaptive and should be prepared on a case-by-case basis to reflect the failed mitigation characteristics. Contingency plans can include additional plant installation, erosion control, and plant substitutions including type, size, and location. The Contingency measures outlined below can also be utilized in perpetuity to maintain the wetlands and buffers associated with the proposed project site.

This project proposes 10 years of monitoring for the wetland mitigation actions in compliance with the goals and performance standards outlined in Section 3.3 of this report. However, USACE may request additional years of monitoring and formal reporting if the site has not met the goals and performance standards by Year 10. In compliance with 33 CFR 332.7(d)(2), the mitigation areas on the project site will be maintained in perpetuity by the landowner. No additional formal reporting beyond the Year 10 Monitoring Report is required at this time.

Contingency/maintenance activities may include, but are not limited to:

1. Using plugs instead of seed for emergent vegetation coverage where seeded material does not become well-established;
2. Replacing plants lost to vandalism, drought, or disease, as necessary;
3. Replacing any plant species with a 20 percent or greater mortality rate after two growing seasons with the same species or native species of similar form and function;
4. Irrigating the mitigation areas only as necessary during dry weather if plants appear to be too dry, with a minimal quantity of water;
5. Reseeding and/or repair of wetland and buffer areas as necessary if erosion or sedimentation occurs;

6. Spot treat non-native invasive plant species; and
7. Removing all trash or undesirable debris from the buffer area as necessary.

### **3.8 Critical Area Protective Measures**

Long-term protection of the mitigation site shall be provided by placement in an environmentally critical areas easement dedicated to the City of Arlington as required per AMC 20.93.290, which will preclude grading or any recontouring of the land, placement of structures, wells, leach fields, utility line, and/or other easements, and any other thing; vehicle activity, grazing, dumping, and the addition or removal of any vegetation unless pursuant to an approved restoration plan in perpetuity. The location and limitations associated with the mitigation area shall be shown on the face of the deed or plat applicable to the property and shall be recorded with the Snohomish County recording department. The easement will include appropriate signs and fencing to mark the boundaries and prevent intrusion.

As a condition of the 401 Water Quality Certification, a draft deed notification shall be submitted to the Washington State Department of Ecology prior to recording, and proof of recording shall be documented in the as-built report.

### **3.9 Financial Assurances**

Under AMC 20.93.390(5), performance security is required to assure that all actions approved under this Mitigation Plan are satisfactorily completed in accordance with the mitigation plan, performance standards, and regulatory conditions of approval. Prior to final inspection, a maintenance and warranty security (bond) shall be obtained according to the conditions of approved development agreements with the City and appropriate permitting agencies.

## Chapter 4. Closure

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The findings and conclusions documented in this report have been prepared for specific application for the Lindsay Annexation project. These findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. The conclusions and recommendations presented in this assessment report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this assessment may need to be revised wholly or in part in the future.

## Chapter 5. References

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# Appendix A – Existing Conditions and Site Plans

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**PLAN LEGEND**

- PROPERTY LINE
- WETLAND BOUNDARY
- APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED)
- STREAM CENTERLINE
- STREAM ORDINARY HIGH WATER LINE (OHW)
- EXISTING DITCH CENTERLINE

**MITIGATION LEGEND**

WETLAND MITIGATION	
	WETLAND C ENHANCEMENT 8,626 SF
	WETLAND RESTORATION 20,455 SF
	WETLAND CREATION 47,347 SF
BUFFER MITIGATION	
	WETLAND AS BUFFER ENHANCEMENT (INDIRECT WETLAND IMPACTS) 12,003 SF
	BUFFER ENHANCEMENT 61,329 SF
	BUFFER RESTORATION (FOR TEMPORARY CONSTRUCTION RELATED IMPACTS; TO BE RESTORED) 63,216 SF
	BUFFER CREATION 9,164 SF

FENCES & SIGNS	
	POST-CONSTRUCTION BUFFER/ CRITICAL AREA FENCE 1,235 SF
	CRITICAL AREA SIGN 23 SIGNS

- NOTES**
- SURVEY & SITE PLAN PROVIDED BY LAND TECHNOLOGIES, INC., 18820 3RD AVE NE, ARLINGTON, WA 98223, 360-652-9727
  - SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



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**LINDSAY ANNEXATION - PENDING PROJECT**  
 8014, 8228, 8210, 8326 172ND STREET NE, ARLINGTON, WA 98223

SNOHOMISH COUNTY PARCEL NUMBER(S):  
 31052500200600, 31052600100100, 31052600100200, 31052600102200, 31052600102300

REVISIONS:	DATE	BY

DATE:	12/31/2025
SCALE:	AS SHOWN
BY:	MW
JOB #:	2419.0002
SHEET:	M2.1

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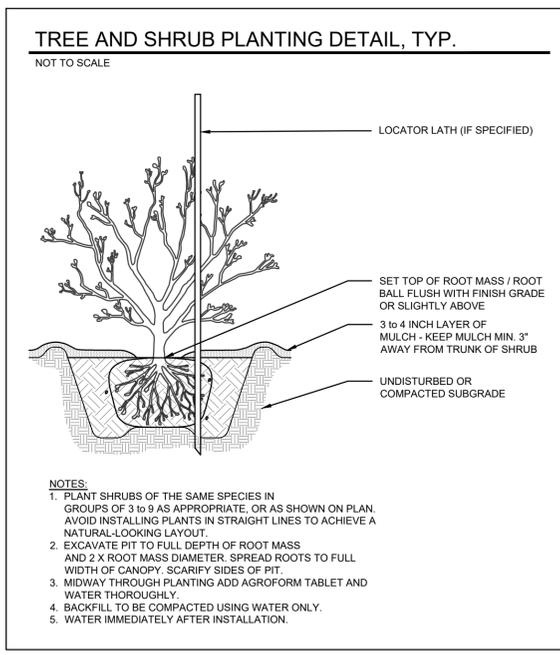
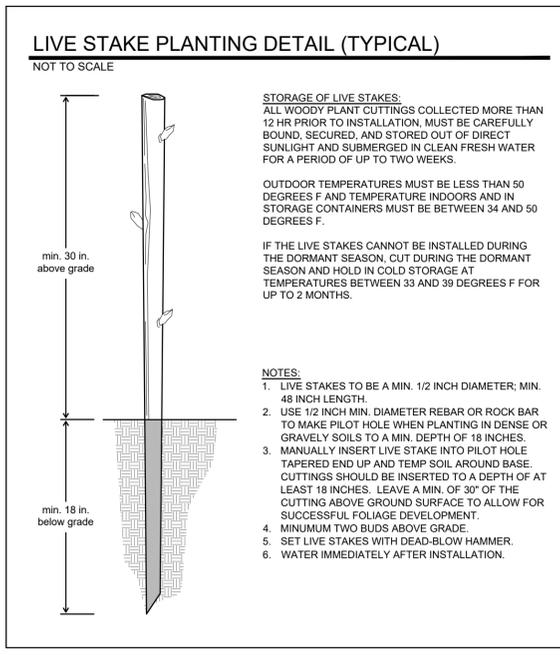


**PLAN LEGEND**

- PROPERTY LINE
- WETLAND BOUNDARY
- APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED)
- POST-CONSTRUCTION BUFFER
- STREAM CENTERLINE
- STREAM ORDINARY HIGH WATER LINE (OHW)
- EXISTING DITCH CENTERLINE

**PLANTING LEGEND**

	WETLAND ENHANCEMENT PLANTINGS	19,938 SF
	WETLAND RESTORATION/CREATION PLANTINGS	68,492 SF
	BUFFER ENHANCEMENT/CREATION PLANTINGS	70,283 SF
	BUFFER RESTORATION/CREATION PLANTINGS	67,869 SF
<b>TOTAL PLANTED AREAS:</b>		<b>226,582 SF</b>



- NOTES**
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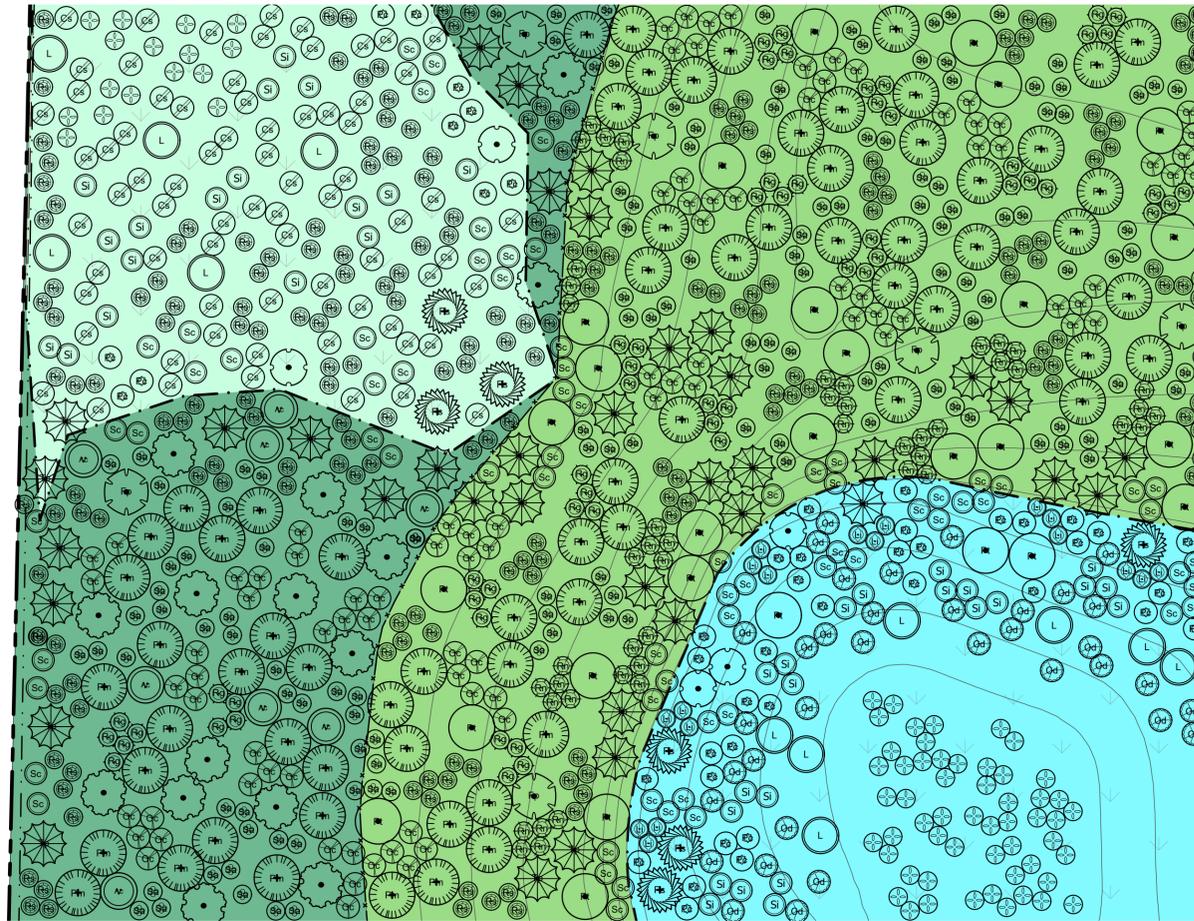
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DATE:	12/31/2025
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BY:	MW
JOB #:	2419.0002
SHEET:	M3.0

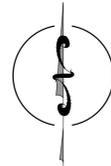
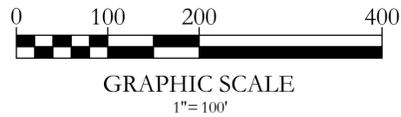
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 Plotted: January 2, 2026

PLANTING TYPICAL

Scientific Name	Common Name
<b>TREES</b>	
<i>Alnus rubra</i>	red alder
<i>Frangula purshiana (Rhamnus p.)</i>	cascara
<i>Malus fusca (Pyrus f.)</i>	Pacific crabapple
<i>Picea sitchensis</i>	Sitka spruce
<i>Populus trichocarpa</i>	black cottonwood
<i>Pseudotsuga menziesii</i>	Douglas fir
<i>Salix lasiandra</i>	Pacific willow
<i>Salix scouleriana</i>	Scouler's willow
<i>Salix sitchensis</i>	Sitka willow
<i>Thuja plicata</i>	western redcedar
<b>SHRUBS</b>	
<i>Acer circinatum</i>	vine maple
<i>Cornus stolonifera</i>	red-osier dogwood
<i>Crataegus douglasii</i>	Douglas hawthorn
NO SYMBOL	<i>Gaultheria shallon</i> salal
<i>Lonicera involucrata</i>	black twinberry
<i>Oemleria cerasiformis</i>	Indian plum
<i>Physocarpus capitatus</i>	Pacific ninebark
<i>Rosa gymnocarpa</i>	bald hip rose
<i>Rosa nutkana</i>	Nootka rose
<i>Rubus spectabilis var. spectabilis</i>	salmonberry
<i>Spiraea douglasii</i>	Douglas spirea
<i>Symphoricarpos albus var. laevigatus</i>	common snowberry
<b>GRASSES</b>	
<i>Carex obnupta</i>	slough sedge
<b>SEED MIXES (www.riverrefugeseed.com)</b>	
<b>Native Upland Grass Mix #9</b>	<b>20 lbs/acre</b>
<i>Elymus glaucus</i>	Blue wildrye
<i>Bromus carinatus</i>	California brome
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Festuca roemerii</i>	Roemer's fescue
<i>Deschampsia elongata</i>	Slender hairgrass
<i>Agrostis exarata</i>	Spike bentgrass
<i>Deschampsia cespitosa</i>	Tufted hairgrass
<i>Festuca rubra var. rubra</i>	Red fescue
<b>Native Wetland Grass Mix #10</b>	<b>20 lbs/acre</b>
<i>Glyceria occidentalis</i>	Western mangrass
<i>Beckmannia syzigachne</i>	American sloughgrass
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Alopecurus aequalis</i>	Shortawn foxtail
<b>Moist Soil Sedge &amp; Rush Mix #11</b>	<b>20 lbs/acre</b>
<i>Carex unilateralis</i>	One-sided sedge
<i>Carex densa</i>	Dense sedge
<i>Juncus effusus</i>	Common rush
<i>Juncus tenuis</i>	Slender rush
<i>Juncus bufonius</i>	Toad rush
<i>Carex stipitata</i>	Awl fruited sedge
<i>Carex obnupta</i>	Slough sedge



PLANTING TYPICAL



PLANTING LEGEND

- WETLAND ENHANCEMENT PLANTINGS
- WETLAND RESTORATION/CREATION PLANTINGS
- BUFFER ENHANCEMENT/CREATION PLANTINGS
- BUFFER RESTORATION/CREATION PLANTINGS

PLAN LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- EXISTING DITCH CENTERLINE

NOTES

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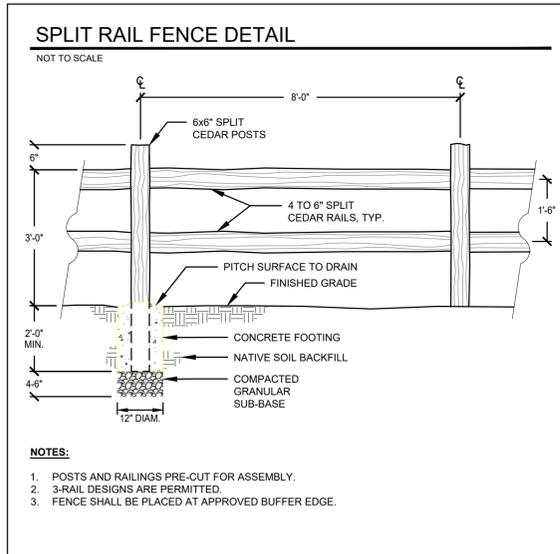
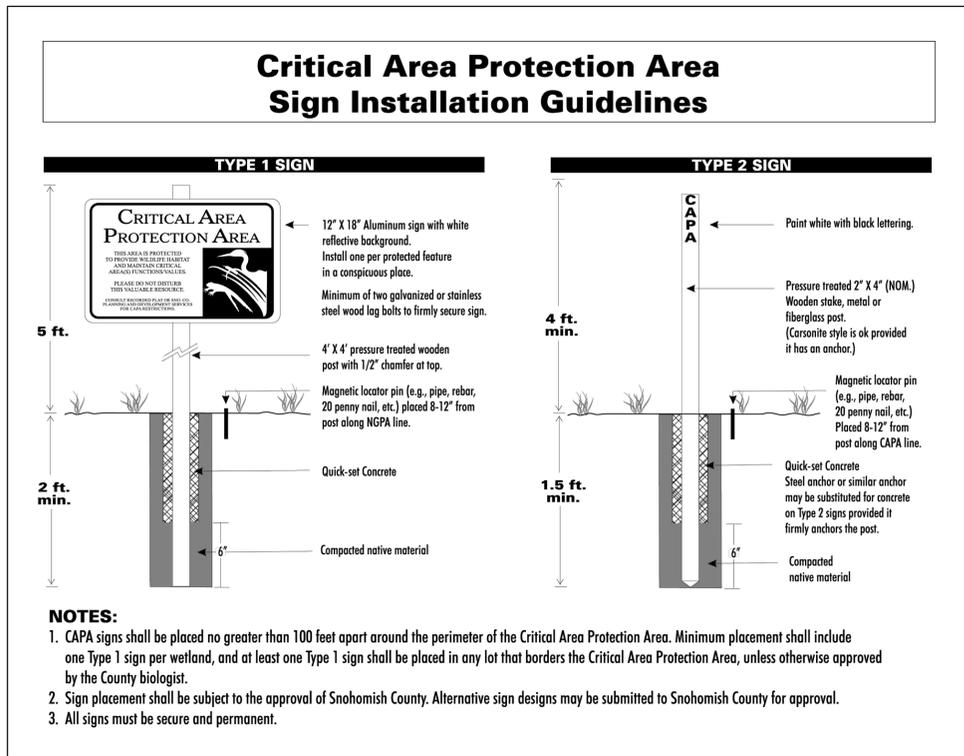
REVISIONS:	DATE	BY

DATE:	12/31/2025
SCALE:	AS SHOWN
BY:	MW
JOB #:	2419.0002
SHEET:	M3.1

PLANT SCHEDULE

		Area (sf):	68,492	19,938	67,869	70,283	226,582				
		Cov'g (%):	100	75	100	75					
		Trees (%):	50	50	50	50					
		Shrubs (%):	50	50	50	50					
Scientific Name	Common Name	WL Status	Wetland Restoration/ Creation	Wetland Enhancement	Buffer Restoration	Buffer Enhancement	TOTAL	Spacing (min.)	Height (min.)	Size (min.)	Planting Area
<b>TREES</b>											
			(Qty)	(Qty)	(Qty)	(Qty)	(Qty)				
<i>Alnus rubra</i>	red alder	FAC	0	0	0	100	100	10 ft	3 ft	1 gal	Dry/Moist - on hummock
<i>Frangula purshiana (Rhamnus p.)</i>	cascara	FAC	0	0	12	12	24	10 ft	3 ft	2 gal	Dry
<i>Malus fusca (Pyrus f.)</i>	Pacific crabapple	FACW	18	4	0	0	22	10 ft	3 ft	2 gal	Wet - in wetland
<i>Picea sitchensis</i>	Sitka spruce	FAC	27	6	0	0	33	10 ft	3 ft	5 gal	Moist - on hummock
<i>Populus trichocarpa</i>	black cottonwood	FAC	18	0	77	0	95	10 ft	3 ft	2 gal	Moist/Wet - on hummock
<i>Pseudotsuga menziesii</i>	Douglas fir	FACU	0	0	153	147	300	10 ft	3 ft	5 gal	Dry
<i>Salix lasiandra</i>	Pacific willow	FACW	44	11	0	0	55	10 ft	4 ft	Stakes	Wet
<i>Salix scouleriana</i>	Scouler's willow	FAC	141	29	77	74	321	5 ft	4 ft	Stakes	Dry
<i>Salix sitchensis</i>	Sitka willow	FACW	141	36	0	0	177	5 ft	4 ft	Stakes	Moist/Wet
<i>Thuja plicata</i>	western redcedar	FAC	9	2	77	74	162	10 ft	3 ft	5 gal	Moist - on hummock
<b>Total:</b>			<b>398</b>	<b>88</b>	<b>396</b>	<b>407</b>	<b>1289</b>				
<b>SHRUBS</b>											
			(Qty)	(Qty)	(Qty)	(Qty)	(Qty)				
<i>Acer circinatum</i>	vine maple	FAC	0	0	0	52	52	10 ft	4 ft	2 gal	Dry/Moist
<i>Cornus stolonifera</i>	red-osier dogwood	FACW	686	163	0	0	849	4 ft	3 ft	1 gal	Moist/Wet
<i>Crataegus douglasii</i>	Douglas hawthorn	FAC	220	0	0	0	220	5 ft	3 ft	2 gal	Moist
<i>Gaultheria shallon</i>	santal	FACU	0	0	458	0	458	4 ft	1 ft	1 gal	Dry
<i>Lonicera involucrata</i>	black twinberry	FAC	115	0	0	0	115	4 ft	2 ft	1 gal	Moist/Wet
<i>Oemleria cerasiformis</i>	Indian plum	FACU	0	0	196	206	402	5 ft	2 ft	2 gal	Dry
<i>Physocarpus capitatus</i>	Pacific ninebark	FACW	220	21	0	0	241	5 ft	2 ft	1 gal	Moist/Wet
<i>Rosa gymnocarpa</i>	bald hip rose	FACU	0	0	153	321	474	4 ft	2 ft	1 gal	Dry/Moist
<i>Rosa nutkana</i>	Nootka rose	FAC	0	0	153	0	153	4 ft	2 ft	1 gal	Dry
<i>Rubus spectabilis var. spectabilis</i>	salmonberry	FAC	0	130	305	321	756	4 ft	2 ft	1 gal	Moist
<i>Spiraea douglasii</i>	Douglas spirea	FACW	343	33	0	0	376	4 ft	2 ft	1 gal	Moist/Wet
<i>Symphoricarpos albus var. laevigatus</i>	common snowberry	FACU	0	0	305	321	626	4 ft	2 ft	1 gal	Dry
<b>Total:</b>			<b>1584</b>	<b>347</b>	<b>1570</b>	<b>1221</b>	<b>4722</b>				
<b>GRASSES</b>											
			(Qty)	(Qty)	(Qty)	(Qty)	(Qty)				
<i>Carex obnupta</i>	slough sedge	OBL	500	0	0	0	500	4 ft	6 in	plug	Wet
<b>Total:</b>			<b>500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>				
<b>SEED MIXES (www.riverrefugeseed.com)</b>											
		WL Status	Wetland Restoration/ Creation	Wetland Enhancement	Buffer Restoration	Buffer Enhancement	TOTAL				
<b>Native Upland Grass Mix #9</b>			(Qty)	(Qty)	(Qty)	(Qty)	(Qty)				
<b>20 lbs/acre</b>											
<i>Elymus glaucus</i>	Blue wildrye	30%									
<i>Bromus carinatus</i>	California brome	25%									
<i>Hordeum brachyantherum</i>	Meadow barley	10%									
<i>Festuca roemerii</i>	Roemer's fescue	10%									
<i>Deschampsia elongata</i>	Slender hairgrass	10%									
<i>Agrostis exarata</i>	Spike bentgrass	5%									
<i>Deschampsia cespitosa</i>	Tufted hairgrass	5%									
<i>Festuca rubra var. rubra</i>	Red fescue	5%									
<b>Total (lbs):</b>			<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>31</b>				
<b>Native Wetland Grass Mix #10</b>											
<b>20 lbs/acre</b>											
<i>Glyceria occidentalis</i>	Western manna grass	40%									
<i>Beckmannia syzigachne</i>	American slough grass	30%									
<i>Hordeum brachyantherum</i>	Meadow barley	20%									
<i>Atopacurus aequalis</i>	Shortawn foxtail	10%									
<b>Total (lbs):</b>			<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>				
<b>Moist Soil Sedge &amp; Rush Mix #11</b>											
<b>20 lbs/acre</b>											
<i>Carex unilateralis</i>	One-sided sedge	70%									
<i>Carex densa</i>	Dense sedge	12%									
<i>Juncus effusus</i>	Common rush	5%									
<i>Juncus tenuis</i>	Slender rush	5%									
<i>Juncus bufonius</i>	Toad rush	5%									
<i>Carex stipata</i>	Awl fruited sedge	2%									
<i>Carex obnupta</i>	Slough sedge	1%									
<b>Total (lbs):</b>			<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>				

1 - Scientific names and species identification taken from *Flora of the Pacific Northwest, 2nd Edition* (Hitchcock and Cronquist, Ed. by Gihlin, Ledger, Zika, and Olmstead, 2018).  
 2 - Over-sized container plants are suitable for replacement pending Project Biologist approval.  
 3 - Alternate native plant species may be substituted or added with Project Biologist approval.  
 4 - All disturbed and bare soil areas in the buffer to be seeded with a native grass seed mix.  
 5 - Shrub calculations based upon 5-ft average spacing.  
 6 - Tree calculations based upon 10-ft average spacing.



**NOTES**

- SURVEY & SITE PLAN PROVIDED BY LAND TECHNOLOGIES, INC., 18820 3RD AVE NE, ARLINGTON, WA 98223, 360-652-9727
- SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



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 WWW.SOUNDVIEWCONSULTANTS.COM

2907 HARBORVIEW DRIVE  
 GIG HARBOR, WASHINGTON 98335

**LINDSAY ANNEXATION - PENDING PROJECT**  
 8014, 8228, 8210, 8326 172ND STREET NE,  
 ARLINGTON, WA 98223

SNOHOMISH COUNTY PARCEL NUMBER(S):  
 310525002006000, 310526001001000, 310526001002000,  
 310526001022000, 310526001023000

REVISIONS:	DATE	BY

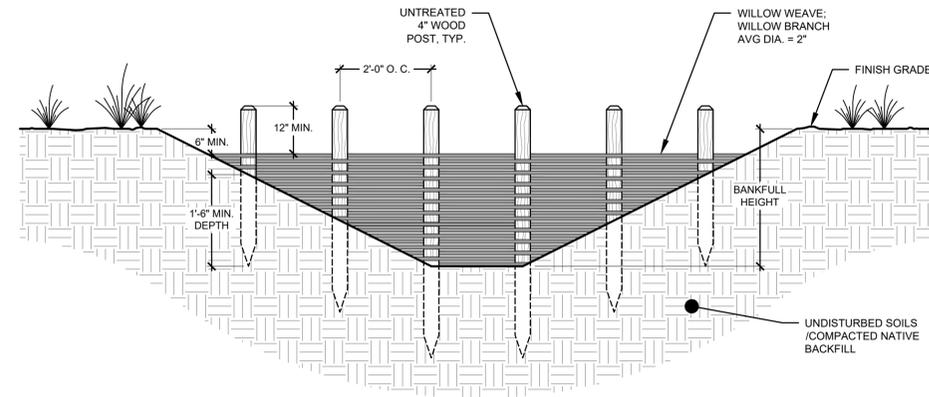
DATE:	12/31/2025
SCALE:	AS SHOWN
BY:	MW
JOB #:	2419.0002
SHEET:	M3.2

BEAVER DAM ANALOG

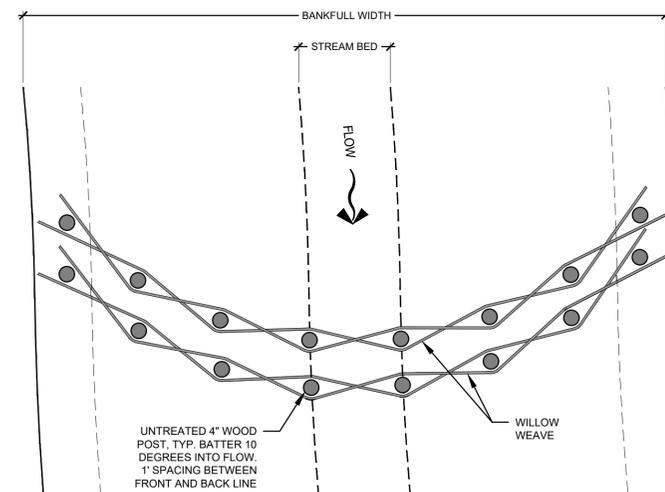


BEAVER DAM ANALOG, TYP.

NOT TO SCALE



CROSS-SECTION



PLAN VIEW

NOTES

1. SURVEY & SITE PLAN PROVIDED BY LAND TECHNOLOGIES, INC., 18820 3RD AVE NE, ARLINGTON, WA 98223, 360-652-9727
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SCALE:	AS SHOWN
BY:	MW
JOB #:	2419.0002
SHEET:	M4.0



**MITIGATION PLAN**

**PERFORMANCE STANDARD 1.4.3** - STATE-LISTED, CLASS-A NOXIOUS WEEDS, PURPLE LOOSESTRIFE (*LYTHRUM SALICARIA*), AND ALL NON-NATIVE KNOTWEEDS AND HYBRIDS, AND HYBRIDS INCLUDING *POLYGONUM CUSPIDATUM*, *P. POLYSTACHYUM*, *P. SACHALINENSE*, *P. BOHEMICUM*, ETC. WILL BE ERADICATED FROM THE WETLAND CREATION AREA DURING ALL MONITORING YEARS.

**GOAL 2** - RESTORE A MINIMUM OF 21,145 SQUARE FEET OF WETLAND A ADJACENT TO THE WETLAND CREATION AREA TO PROVIDE A MODERATE LEVEL OF HABITAT FUNCTIONS.

**OBJECTIVE 2.1** - INCREASE NATIVE WOODY PLANT COVER WITHIN THE WETLAND RESTORATION AREA TO CREATE DIVERSE HORIZONTAL AND VERTICAL VEGETATION STRUCTURE AND ADDITIONAL WILDLIFE HABITAT.

**PERFORMANCE STANDARD 2.1.1** - AT THE END OF YEAR 1, MINIMUM PLANT SURVIVORSHIP WITHIN THE WETLAND RESTORATION AREA WILL BE AT LEAST 100 PERCENT OF THE NUMBER OF INSTALLED TREES AND SHRUBS.

**PERFORMANCE STANDARD 2.1.2** - NATIVE WOODY VEGETATION IN THE WETLAND RESTORATION AREA WILL PROVIDE AT LEAST 20 PERCENT COVER BY YEAR 3, AT LEAST 30 PERCENT COVER BY YEAR 5, AT LEAST 50 PERCENT COVER BY YEAR 7, AND 75 PERCENT COVER BY YEAR 10.

**PERFORMANCE STANDARD 2.1.3** - IN ALL MONITORING YEARS, THE WETLAND ENHANCEMENT AREAS WILL HAVE AT LEAST 2 SPECIES OF NATIVE TREES AND 3 SPECIES OF NATIVE SHRUBS.

**OBJECTIVE 2.2** - EFFECTIVELY CONTROL NON-NATIVE INVASIVE SPECIES WITHIN THE WETLAND ENHANCEMENT AREAS. **PERFORMANCE STANDARD 2.2.1** - NON-NATIVE INVASIVE PLANTS, EXCLUDING REED CANARYGRASS, WILL NOT MAKE UP MORE THAN 20 PERCENT COVER DURING ALL MONITORING YEARS. NON-NATIVE INVASIVE PLANTS ARE PLANTS LISTED BY THE WASHINGTON STATE NOXIOUS WEED BOARD.

**PERFORMANCE STANDARD 2.2.2** - DURING ALL MONITORING YEARS, REED CANARY GRASS COVER WILL NOT EXCEED THE BASELINE PERCENT COVER ESTABLISHED DURING YEAR 0 (AS-BUILT).

**PERFORMANCE STANDARD 1.2.3** - STATE-LISTED, CLASS-A NOXIOUS WEEDS, PURPLE LOOSESTRIFE (*LYTHRUM SALICARIA*), AND ALL NON-NATIVE KNOTWEEDS AND HYBRIDS, AND HYBRIDS INCLUDING *POLYGONUM CUSPIDATUM*, *P. POLYSTACHYUM*, *P. SACHALINENSE*, *P. BOHEMICUM*, ETC. WILL BE ERADICATED FROM THE WETLAND ENHANCEMENT AREA DURING ALL MONITORING YEARS.

**GOAL 3** - ENHANCE A MINIMUM OF 19,938 SQUARE FEET OF WETLAND C TO PROVIDE A MODERATE LEVEL OF HABITAT FUNCTIONS.

**OBJECTIVE 3.1** - INCREASE NATIVE WOODY PLANT COVER WITHIN THE WETLAND ENHANCEMENT AREAS TO CREATE DIVERSE HORIZONTAL AND VERTICAL VEGETATION STRUCTURE AND ADDITIONAL WILDLIFE HABITAT.

**PERFORMANCE STANDARD 3.1.1** - AT THE END OF YEAR 1, MINIMUM PLANT SURVIVORSHIP WITHIN THE WETLAND ENHANCEMENT AREA WILL BE AT LEAST 100 PERCENT OF THE NUMBER OF INSTALLED TREES AND SHRUBS.

**PERFORMANCE STANDARD 3.1.2** - NATIVE WOODY VEGETATION IN THE WETLAND ENHANCEMENT AREA WILL PROVIDE AT LEAST 20 PERCENT COVER BY YEAR 3, AT LEAST 30 PERCENT COVER BY YEAR 5, AT LEAST 50 PERCENT COVER BY YEAR 7, AND 75 PERCENT COVER BY YEAR 10.

**PERFORMANCE STANDARD 3.1.3** - IN ALL MONITORING YEARS, THE WETLAND ENHANCEMENT AREAS WILL HAVE AT LEAST 2 SPECIES OF NATIVE TREES AND 3 SPECIES OF NATIVE SHRUBS.

**OBJECTIVE 3.2** - EFFECTIVELY CONTROL NON-NATIVE INVASIVE SPECIES WITHIN THE WETLAND ENHANCEMENT AREAS.

**PERFORMANCE STANDARD 3.2.1** - NON-NATIVE INVASIVE PLANTS, EXCLUDING REED CANARYGRASS, WILL NOT MAKE UP MORE THAN 20 PERCENT COVER DURING ALL MONITORING YEARS. NON-NATIVE INVASIVE PLANTS ARE PLANTS LISTED BY THE WASHINGTON STATE NOXIOUS WEED BOARD.

**PERFORMANCE STANDARD 3.2.2** - DURING ALL MONITORING YEARS, REED CANARY GRASS COVER WILL NOT EXCEED THE BASELINE PERCENT COVER ESTABLISHED DURING YEAR 0 (AS-BUILT).

**PERFORMANCE STANDARD 3.2.3** - STATE-LISTED, CLASS-A NOXIOUS WEEDS, PURPLE LOOSESTRIFE (*LYTHRUM SALICARIA*), AND ALL NON-NATIVE KNOTWEEDS AND HYBRIDS, AND HYBRIDS INCLUDING *POLYGONUM CUSPIDATUM*, *P. POLYSTACHYUM*, *P. SACHALINENSE*, *P. BOHEMICUM*, ETC. WILL BE ERADICATED FROM THE WETLAND ENHANCEMENT AREA DURING ALL MONITORING YEARS.

**GOAL 4** - ENHANCE 138,152 SQUARE FEET OF BUFFER (WHICH INCLUDES 9,164 SQUARE FEET OF BUFFER CREATION TO OFFSET 2,467 SQUARE FEET OF PERMANENT BUFFER IMPACTS) AND IMPROVE ONSITE BUFFER FUNCTIONS BY CREATING NATIVE WOODY PLANT COMMUNITIES.

**OBJECTIVE 4.1** - ESTABLISH 138,152 SQUARE FEET OF BUFFER ENHANCEMENT/RESTORATION AREAS THAT ARE VEGETATED WITH NATIVE WOODY PLANT COVER TO CREATE DIVERSE HORIZONTAL AND VERTICAL VEGETATION STRUCTURE AND WILDLIFE HABITAT.

**PERFORMANCE STANDARD 4.1.1** - AT THE END OF YEAR 1, MINIMUM PLANT SURVIVORSHIP WITHIN THE BUFFER MITIGATION AREAS WILL BE AT LEAST 100 PERCENT OF THE NUMBER OF INSTALLED TREES AND SHRUBS.

**PERFORMANCE STANDARD 4.1.2** - NATIVE WOODY VEGETATION IN THE WETLAND BUFFER MITIGATION AREAS WILL PROVIDE AT LEAST 20 PERCENT COVER BY YEAR 3, AT LEAST 30 PERCENT COVER BY YEAR 5, AT LEAST 50 PERCENT COVER BY YEAR 7, AND 75 PERCENT COVER BY YEAR 10.

**PERFORMANCE STANDARD 4.1.3** - IN ALL MONITORING YEARS, THE BUFFER MITIGATION AREAS WILL HAVE AT LEAST 2 NATIVE TREE SPECIES AND 4 NATIVE SHRUBS SPECIES.

**OBJECTIVE 4.2** - EFFECTIVELY CONTROL AND/OR ELIMINATE NON-NATIVE INVASIVE SPECIES IN THE BUFFER ENHANCEMENT AREAS.

**PERFORMANCE STANDARD 4.2.1** - NON-NATIVE INVASIVE PLANTS (EXCLUDING REED CANARY GRASS) WILL NOT MAKE UP MORE THAN 20 PERCENT COVER DURING ALL MONITORING YEARS. NON-NATIVE INVASIVE PLANTS ARE PLANTS LISTED BY THE WASHINGTON STATE NOXIOUS WEED BOARD.

**PERFORMANCE STANDARD 4.2.2** - DURING ALL MONITORING YEARS, REED CANARY GRASS COVER WILL NOT EXCEED THE BASELINE PERCENT COVER ESTABLISHED DURING YEAR 0 (AS-BUILT).

**PERFORMANCE STANDARD 4.2.3** - STATE-LISTED, CLASS-A NOXIOUS WEEDS, PURPLE LOOSESTRIFE (*LYTHRUM SALICARIA*), AND ALL NON-NATIVE KNOTWEEDS AND HYBRIDS, AND HYBRIDS INCLUDING *POLYGONUM CUSPIDATUM*, *P. POLYSTACHYUM*, *P. SACHALINENSE*, *P. BOHEMICUM*, ETC. WILL BE ERADICATED FROM THE BUFFER ENHANCEMENT AREA DURING ALL MONITORING YEARS.

**3.4 PLANT MATERIALS AND INSTALLATION**

PLANT MATERIALS

ALL PLANT MATERIALS TO BE USED FOR MITIGATION ACTIONS SHALL BE NURSERY GROWN STOCK FROM A REPUTABLE, LOCAL SOURCE. ONLY NATIVE SPECIES ARE TO BE USED; NO HYBRIDS OR CULTIVARS SHALL BE ALLOWED. PLANT MATERIAL PROVIDED WILL BE TYPICAL OF THEIR SPECIES OR VARIETY; IF NOT CUTTINGS THEY WILL EXHIBIT NORMAL, DENSELY DEVELOPED BRANCHES AND VIGOROUS, FIBROUS ROOT SYSTEMS. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, AND ALL FORMS OF DISEASE AND INFESTATION.

CONTAINER STOCK SHALL HAVE BEEN GROWN IN ITS DELIVERY CONTAINER FOR NOT LESS THAN SIX MONTHS BUT NOT MORE THAN TWO YEARS. PLANTS SHALL NOT EXHIBIT ROOTBOUND CONDITIONS. UNDER NO CIRCUMSTANCES SHALL CONTAINER STOCK BE HANDLED BY THEIR TRUNKS, STEMS, OR TOPS. SEED MIXTURE USED FOR HAND OR HYDROSEEDING SHALL CONTAIN FRESH, CLEAN, AND NEW CROP SEED MIXED BY AN APPROVED METHOD. THE MIXTURE IS SPECIFIED IN THE PLAN SET.

ALL PLANT MATERIAL SHALL BE INSPECTED BY THE PROJECT SCIENTIST UPON DELIVERY. PLANT MATERIAL NOT CONFORMING TO THE SPECIFICATIONS BELOW SHALL BE REJECTED AND REPLACED BY THE PLANTING CONTRACTOR. REJECTED PLANT MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE.

FERTILIZER SHALL BE IN THE FORM OF AGRIFORM PLANT TABS OR AN APPROVED LIKE FORM. MULCH SHALL CONSIST OF STERILE WHEAT STRAW FOR SEEDED AREAS (IF NECESSARY) AND CLEAN RECYCLED WOOD CHIPS APPROXIMATELY 1/2-INCH TO 1-INCH IN SIZE AND 1/2-INCH THICK FOR WOODY PLANTS. THE MULCH MATERIAL MAY BE SOURCED FROM NON-INVASIVE WOODY MATERIALS SOURCED FROM THE LAND CLEARING ACTIVITIES.

PLANT SCHEDULING, SPECIES, SIZE, AND SPACING

PLANT INSTALLATION SHALL OCCUR AS CLOSE TO CONCLUSION OF THE CONSTRUCTION ACTIVITIES AS POSSIBLE TO LIMIT EROSION AND LIMIT THE TEMPORAL LOSS OF FUNCTION PROVIDED BY THE WETLANDS, STREAM AND BUFFERS. ALL PLANTING WILL OCCUR BETWEEN SEPTEMBER 1 AND MAY 1 TO ENSURE PLANTS DO NOT DRY OUT AFTER INSTALLATION, OR TEMPORARY IRRIGATION MEASURES MAY BE NECESSARY.

QUALITY CONTROL FOR PLANTING PLAN

ALL PLANT MATERIAL SHALL BE INSPECTED BY THE QUALIFIED PROJECT SCIENTIST UPON DELIVERY. PLANT MATERIAL NOT CONFORMING TO THE SPECIFICATIONS ABOVE WILL BE REJECTED AND REPLACED BY THE PLANTING CONTRACTOR. REJECTED PLANT MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE. UNDER NO CIRCUMSTANCES SHALL CONTAINER STOCK BE HANDLED BY THEIR TRUNKS, STEMS, OR TOPS.

THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE RESPONSIBLE PROJECT SCIENTIST WITH DOCUMENTATION OF PLANT MATERIAL THAT INCLUDES THE SUPPLYING NURSERY CONTACT INFORMATION, PLANT SPECIES, PLANT QUANTITIES, AND PLANT SIZES.

PRODUCT HANDLING, DELIVERY, AND STORAGE

ALL SEED AND FERTILIZER SHALL BE DELIVERED IN ORIGINAL, UNOPENED, AND UNDAMAGED CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. THIS MATERIAL SHALL BE STORED IN A MANNER TO PREVENT WETTING AND DETERIORATION. ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICE SHALL BE TAKEN IN PREPARING PLANTS FOR MOVING. WORKMANSHIP THAT FAILS TO MEET INDUSTRY STANDARDS WILL BE REJECTED. PLANTS WILL BE PACKED, TRANSPORTED, AND HANDLED WITH CARE TO ENSURE PROTECTION AGAINST INJURY AND FROM DRYING OUT. IF PLANTS CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY THEY SHALL BE PROTECTED WITH SOIL, WET PEAT MOSS, OR IN A MANNER ACCEPTABLE TO THE RESPONSIBLE PROJECT SCIENTIST. PLANTS, FERTILIZER, AND MULCH NOT INSTALLED IMMEDIATELY UPON DELIVERY SHALL BE SECURED ON THE SITE TO PREVENT THEFT OR TAMPERING. NO PLANT SHALL BE BOUND WITH ROPE OR WIRE IN A MANNER THAT COULD DAMAGE OR BREAK THE BRANCHES. PLANTS TRANSPORTED ON OPEN VEHICLES SHOULD BE SECURED WITH A PROTECTIVE COVERING TO PREVENT WINDBURN.

PREPARATION AND INSTALLATION OF PLANT MATERIALS

THE PLANTING CONTRACTOR SHALL VERIFY THE LOCATION OF ALL ELEMENTS OF THE MITIGATION PLAN WITH THE RESPONSIBLE PROJECT SCIENTIST PRIOR TO INSTALLATION. THE RESPONSIBLE PROJECT SCIENTIST RESERVES THE RIGHT TO ADJUST THE LOCATIONS OF LANDSCAPE ELEMENTS DURING THE INSTALLATION PERIOD AS APPROPRIATE. IF OBSTRUCTIONS ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, PLANTING OPERATIONS SHALL CEASE UNTIL ALTERNATE PLANT LOCATIONS HAVE BEEN SELECTED BY AND/OR APPROVED BY THE PROJECT SCIENTIST. CIRCULAR PLANT PITS WITH VERTICAL SIDES WILL BE EXCAVATED FOR ALL CONTAINER STOCK. THE PITS SHOULD BE AT LEAST 1.5 TIMES THE WIDTH OF THE ROOTBALL, AND

THE DEPTH OF THE PIT SHOULD ACCOMMODATE THE ENTIRE ROOT SYSTEM.

BROKEN ROOTS SHALL BE PRUNED WITH A SHARP INSTRUMENT AND ROOTBALLS SHALL BE THOROUGHLY SOAKED PRIOR TO INSTALLATION. SET PLANT MATERIAL UPRIGHT IN THE PLANTING PIT TO PROPER GRADE AND ALIGNMENT. WATER PLANTS THOROUGHLY MIDWAY THROUGH BACKFILLING AND ADD AGRIFORM TABLETS. WATER PITS AGAIN UPON COMPLETION OF BACKFILLING. NO FILLING SHALL OCCUR AROUND TRUNKS OR STEMS. DO NOT USE FROZEN OR MUDDY MIXTURES FOR BACKFILLING. FORM A RING OF SOIL AROUND THE EDGE OF EACH PLANTING PIT TO RETAIN WATER AND INSTALL A 4- TO 6-INCH LAYER OF MULCH AROUND THE BASE OF EACH CONTAINER PLANT.

TEMPORARY IRRIGATION SPECIFICATIONS

WHILE THE NATIVE SPECIES SELECTED FOR MITIGATION ACTIONS ARE HARDY AND TYPICALLY THRIVE IN NORTHWEST CONDITIONS AND THE PROPOSED ACTIONS ARE PLANNED IN AREAS WITH SUFFICIENT HYDROPERIODS FOR THE SPECIES SELECTED, SOME INDIVIDUAL PLANTS MIGHT PERISH DUE TO DRY CONDITIONS. THEREFORE, IRRIGATION OR REGULAR WATERING MAY BE PROVIDED AS NECESSARY FOR THE DURATION OF THE FIRST TWO GROWING SEASONS, TWO TIMES PER WEEK WHILE THE NATIVE PLANTINGS BECOME ESTABLISHED. IF USED, IRRIGATION WILL BE DISCONTINUED AFTER TWO GROWING SEASONS. FREQUENCY AND AMOUNT OF IRRIGATION WILL BE DEPENDENT UPON CLIMATIC CONDITIONS AND MAY REQUIRE MORE OR LESS FREQUENT WATERING THAN TWO TIMES PER WEEK.

INVASIVE PLANT CONTROL AND REMOVAL

INVASIVE SPECIES ONSITE TO BE REMOVED INCLUDE HIMALAYAN BLACKBERRY, REED CANARYGRASS, AND ANY LISTED NOXIOUS WEEDS OR OTHER INVASIVE SPECIES THAT ARE EXISTING OR MAY COLONIZE THE MITIGATION AREA. THESE SPECIES ARE FOUND NEARBY; THEREFORE, TO ENSURE THESE SPECIES DO NOT EXPAND FOLLOWING THE MITIGATION ACTIONS, INVASIVE SPECIES WITHIN THE MITIGATION AREAS WILL BE PRETREATED WITH A ROOT-KILLING HERBICIDE APPROVED FOR USE IN AQUATIC SITES (E.G., E.G. GLYPHOSATE 5.4 CONTAINING HERBICIDE) A MINIMUM OF TWO WEEKS PRIOR TO BEING REMOVED FROM THE WETLAND AND STREAM BUFFERS. THE PRE-TREATMENT WITH HERBICIDE SHALL OCCUR PRIOR TO ALL PLANNED MITIGATION ACTIONS, AND SPOT TREATMENT OF ANY SURVIVING OTHER INVASIVE VEGETATION SHOULD BE PERFORMED AGAIN EACH FALL PRIOR TO LEAF SENESCENCE FOR A MINIMUM OF THREE YEARS.

**3.5 MAINTENANCE & MONITORING PLAN**

CONCEPTUAL MAINTENANCE AND MONITORING PLANS ARE DESCRIBED BELOW IN ACCORDANCE WITH AMC 20.93.390, AND ANTICIPATED CONDITIONS FROM OTHER REGULATORY AGENCIES. THE APPLICANT IS COMMITTED TO COMPLIANCE WITH THE MITIGATION PLAN AND OVERALL SUCCESS OF THE PROJECT. AS SUCH, THE APPLICANT WILL CONTINUE TO MAINTAIN THE MITIGATION AREAS, KEEPING THE SITE FREE FROM NON-NATIVE INVASIVE VEGETATION, TRASH, AND YARD WASTE.

THE MITIGATION ACTIONS WILL REQUIRE CONTINUED MONITORING AND MAINTENANCE TO ENSURE THE MITIGATION ACTIONS ARE SUCCESSFUL. THEREFORE, THE MITIGATION AREAS WILL BE MONITORED FOR A PERIOD OF TEN YEARS, WITH FORMAL INSPECTIONS BY A QUALIFIED PROJECT SCIENTIST. MONITORING EVENTS WILL BE SCHEDULED AT THE TIME OF CONSTRUCTION, 30 DAYS AFTER PLANTING, AND MINIMALLY ON AN ANNUAL BASIS DURING YEARS 1, 2, 3, 5, 7, AND 10. CLOSEOUT MONITORING WILL ALSO OCCUR IN YEAR 10. DELINEATION OF COMPENSATORY WETLAND CREATION AREAS BY A QUALIFIED WETLAND SCIENTIST WILL BE CONDUCTED IN YEARS 5 AND 10 TO ENSURE THE SUCCESS OF THE COMPENSATORY ACTIONS. WETLAND DELINEATIONS WILL BE CONDUCTED IN ACCORDANCE WITH THE 1987 ARMY CORPS OF ENGINEERS DELINEATION MANUAL (ENVIRONMENTAL LABORATORY, 1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: WESTERN MOUNTAINS, VALLEYS, AND COAST REGION (VERSION 2) (USACE, 2010).

MONITORING WILL CONSIST OF PERCENT COVER MEASUREMENTS AND STEM COUNTS AT PERMANENT MONITORING STATIONS, WALK-THROUGH SURVEYS TO IDENTIFY INVASIVE SPECIES PRESENCE AND DEAD OR DYING ENHANCEMENT PLANTINGS, PHOTOGRAPHS TAKEN AT FIXED PHOTO POINTS, WILDLIFE OBSERVATIONS, AND GENERAL QUALITATIVE HABITAT AND WETLAND FUNCTION OBSERVATIONS. DATA COLLECTED DURING MONITORING VISITS WILL BE APPROPRIATE FOR THE PERFORMANCE STANDARDS OF THE RELEVANT MONITORING YEAR. THE PERMANENT MONITORING STATIONS WILL BE ESTABLISHED SUCH THAT THE MITIGATION SITE IS REPRESENTATIVELY SAMPLED. CIRCULAR SAMPLE PLOTS, APPROXIMATELY 30 FEET IN DIAMETER (706 SQUARE FEET), WILL BE CENTERED AT EACH MONITORING STATION. SAMPLE PLOTS WILL BE LOCATED ENTIRELY WITHIN THE PROPOSED MITIGATION SITE. SAMPLE PLOT SHAPES MAY NEED TO BE ADJUSTED TO ENSURE THAT SAMPLE PLOTS DO NOT CROSS THE MITIGATION SITE BOUNDARIES; ADJUSTED SAMPLE PLOT SHAPES SHOULD MAINTAIN THE SAME AREA AS THE 30-FOOT-DIAMETER CIRCULAR SAMPLE PLOTS. MEAN SURVIVORSHIP AND PERCENT COVER MEASUREMENTS FROM THE SAMPLE PLOTS WILL BE USED TO ESTIMATE SURVIVORSHIP AND PERCENT COVER ACROSS THE MITIGATION SITE.

TO DETERMINE SURVIVORSHIP, INDIVIDUAL TREE AND SHRUB STEMS WITHIN THE RELEVANT CIRCULAR SAMPLING PLOTS WILL BE COUNTED. PLANTS WHICH GROW SEVERAL STEMS FROM A SINGLE BASE WILL BE COUNTED AS ONE INDIVIDUAL PLANT. THESE TREES AND SHRUBS WILL THEN BE RECORDED AS DEAD/DYING OR ALIVE. TO DETERMINE PERCENT COVER AND SPECIES RICHNESS OF WOODY VEGETATION, EACH SPECIES OF TREE OR SHRUB WITHIN THE APPROXIMATELY 30-FOOT-DIAMETER CIRCULAR SAMPLING PLOTS WILL BE RECORDED AND IDENTIFIED AS NATIVE OR INVASIVE. PLANTS MAY BE RECORDED BY GENUS IF SPECIES IS UNABLE TO BE DETERMINED AT THE TIME OF THE MONITORING VISIT. HERBACEOUS VEGETATION WILL BE SAMPLED FROM A 10-FOOT DIAMETER (78.5 SQUARE FEET), ESTABLISHED AT THE SAME LOCATION AS THE CENTER OF EACH TREE AND SHRUB SAMPLE PLOT. HERBACEOUS VEGETATION WITHIN THE SAMPLING PLOT WILL BE RECORDED TO AT LEAST THE GENUS LEVEL AND IDENTIFIED AS NATIVE OR INVASIVE. A LIST OF OBSERVED TREE, SHRUB, AND HERBACEOUS GENERA OR SPECIES, COVER ESTIMATES, AND WETLAND INDICATOR STATUS WILL BE INCLUDED WITHIN EACH MONITORING REPORT.

**3.6 REPORTING**

FOLLOWING CONSTRUCTION, AN AS-BUILT REPORT WILL BE SUBMITTED TO THE CITY OF ARLINGTON, WSDOE, AND THE USACE WITHIN 30 DAYS. THE AS-BUILT REPORT WILL INCLUDE PHOTOGRAPHS OF THE MITIGATION SITE UPON COMPLETION. ADDITIONALLY, A BRIEF MONITORING REPORT DETAILING THE CURRENT ECOLOGICAL STATUS OF THE WETLAND CREATION AND ENHANCEMENT AND THE BUFFER CREATION AND ENHANCEMENT ACTIONS, MEASUREMENT OF PERFORMANCE STANDARDS, AND MANAGEMENT RECOMMENDATIONS WILL BE PREPARED AND SUBMITTED TO THE CITY OF ARLINGTON, WSDOE, AND USACE BY OCTOBER 31<sup>ST</sup> OF EACH MONITORING YEAR.

**3.7 CONTINGENCY PLAN AND LONG TERM MANAGEMENT**

IF MONITORING RESULTS INDICATE THAT PERFORMANCE STANDARDS ARE NOT BEING MET, IT MAY BE NECESSARY TO IMPLEMENT ALL OR PART OF THE CONTINGENCY PLAN. CAREFUL ATTENTION TO MAINTENANCE IS ESSENTIAL IN ENSURING THAT PROBLEMS

DO NOT ARISE. SHOULD ANY PORTIONS OF THE MITIGATION AREAS FAIL TO MEET THE SUCCESS CRITERIA, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED WITH AGENCY APPROVAL. SUCH PLANS ARE ADAPTIVE AND SHOULD BE PREPARED ON A CASE-BY-CASE BASIS TO REFLECT THE FAILED MITIGATION CHARACTERISTICS. CONTINGENCY PLANS CAN INCLUDE ADDITIONAL PLANT INSTALLATION, EROSION CONTROL, AND PLANT SUBSTITUTIONS INCLUDING TYPE, SIZE, AND LOCATION. THE CONTINGENCY MEASURES OUTLINED BELOW CAN ALSO BE UTILIZED IN PERPETUITY TO MAINTAIN THE WETLANDS AND BUFFERS ASSOCIATED WITH THE PROPOSED PROJECT SITE.

THIS PROJECT PROPOSES 10 YEARS OF MONITORING FOR THE WETLAND MITIGATION ACTIONS IN COMPLIANCE WITH THE GOALS AND PERFORMANCE STANDARDS OUTLINED IN SECTION 3.3 OF THIS REPORT. HOWEVER, USACE MAY REQUEST ADDITIONAL YEARS OF MONITORING AND FORMAL REPORTING IF THE SITE HAS NOT MET THE GOALS AND PERFORMANCE STANDARDS BY YEAR 10. IN COMPLIANCE WITH 33 CFR 332.7(D)(2), THE MITIGATION AREAS ON THE PROJECT SITE WILL BE MAINTAINED IN PERPETUITY BY THE LANDOWNER. NO ADDITIONAL FORMAL REPORTING BEYOND THE YEAR 10 MONITORING REPORT IS REQUIRED AT THIS TIME.

CONTINGENCY/MAINTENANCE ACTIVITIES MAY INCLUDE, BUT ARE NOT LIMITED TO:

1. USING PLUGS INSTEAD OF SEED FOR EMERGENT VEGETATION COVERAGE WHERE SEEDED MATERIAL DOES NOT BECOME WELL-ESTABLISHED;
2. REPLACING PLANTS LOST TO VANDALISM, DROUGHT, OR DISEASE, AS NECESSARY;
3. REPLACING ANY PLANT SPECIES WITH A 20 PERCENT OR GREATER MORTALITY RATE AFTER TWO GROWING SEASONS WITH THE SAME SPECIES OR NATIVE SPECIES OF SIMILAR FORM AND FUNCTION;
4. IRRIGATING THE MITIGATION AREAS ONLY AS NECESSARY DURING DRY WEATHER IF PLANTS APPEAR TO BE TOO DRY, WITH A MINIMAL QUANTITY OF WATER;
5. RESEEDING AND/OR REPAIR OF WETLAND AND BUFFER AREAS AS NECESSARY IF EROSION OR SEDIMENTATION OCCURS;
6. SPOT TREAT NON-NATIVE INVASIVE PLANT SPECIES; AND
7. REMOVING ALL TRASH OR UNDESIRABLE DEBRIS FROM THE BUFFER AREA AS NECESSARY.

**3.8 CRITICAL AREA PROTECTIVE MEASURES**

LONG-TERM PROTECTION OF THE MITIGATION SITE SHALL BE PROVIDED BY PLACEMENT IN AN ENVIRONMENTALLY CRITICAL AREAS EASEMENT DEDICATED TO THE CITY OF ARLINGTON AS REQUIRED PER AMC 20.93.290, WHICH WILL PRECLUDE GRADING OR ANY RECONTOURING OF THE LAND, PLACEMENT OF STRUCTURES, WELLS, LEACH FIELDS, UTILITY LINE, AND/OR OTHER EASEMENTS, AND ANY OTHER THING; VEHICLE ACTIVITY, GRAZING, DUMPING, AND THE ADDITION OR REMOVAL OF ANY VEGETATION UNLESS PURSUANT TO AN APPROVED RESTORATION PLAN IN PERPETUITY. THE LOCATION AND LIMITATIONS ASSOCIATED WITH THE MITIGATION AREA SHALL BE SHOWN ON THE FACE OF THE DEED OR PLAT APPLICABLE TO THE PROPERTY AND SHALL BE RECORDED WITH THE SNOHOMISH COUNTY RECORDING DEPARTMENT. THE EASEMENT WILL INCLUDE APPROPRIATE SIGNS AND FENCING TO MARK THE BOUNDARIES AND PREVENT INTRUSION.

AS A CONDITION OF THE 401 WATER QUALITY CERTIFICATION, A DRAFT DEED NOTIFICATION SHALL BE SUBMITTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY PRIOR TO RECORDING, AND PROOF OF RECORDING SHALL BE DOCUMENTED IN THE AS-BUILT REPORT.

**3.9 FINANCIAL ASSURANCES**

UNDER AMC 20.93.390(5), PERFORMANCE SECURITY IS REQUIRED TO ASSURE THAT ALL ACTIONS APPROVED UNDER THIS MITIGATION PLAN ARE SATISFACTORILY COMPLETED IN ACCORDANCE WITH THE MITIGATION PLAN, PERFORMANCE STANDARDS, AND REGULATORY CONDITIONS OF APPROVAL. PRIOR TO FINAL INSPECTION, A MAINTENANCE AND WARRANTY SECURITY (BOND) SHALL BE OBTAINED ACCORDING TO THE CONDITIONS OF APPROVED DEVELOPMENT AGREEMENTS WITH THE CITY AND APPROPRIATE PERMITTING AGENCIES.

**NOTES**

1. SURVEY & SITE PLAN PROVIDED BY LAND TECHNOLOGIES, INC., 18820 3RD AVE NE, ARLINGTON, WA 98223, 360-652-9727
2. SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



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WWW.SOUNDVIEWCONSULTANTS.COM

2907 HARBORVIEW DRIVE  
GIG HARBOR, WASHINGTON 98335

**LINDSAY ANNEXATION - PENDING PROJECT**  
8014, 8228, 8210, 8326 172ND STREET NE,  
ARLINGTON, WA 98223

SNOHOMISH COUNTY PARCEL NUMBER(S):  
310525002006090, 310526001001001, 310526001002001,  
31052600102200, 31052600102200

REVISIONS:	DATE	BY

DATE:	12/31/2025
SCALE:	AS SHOWN
BY:	MW
JOB #:	2419.0002
SHEET:	M5.1

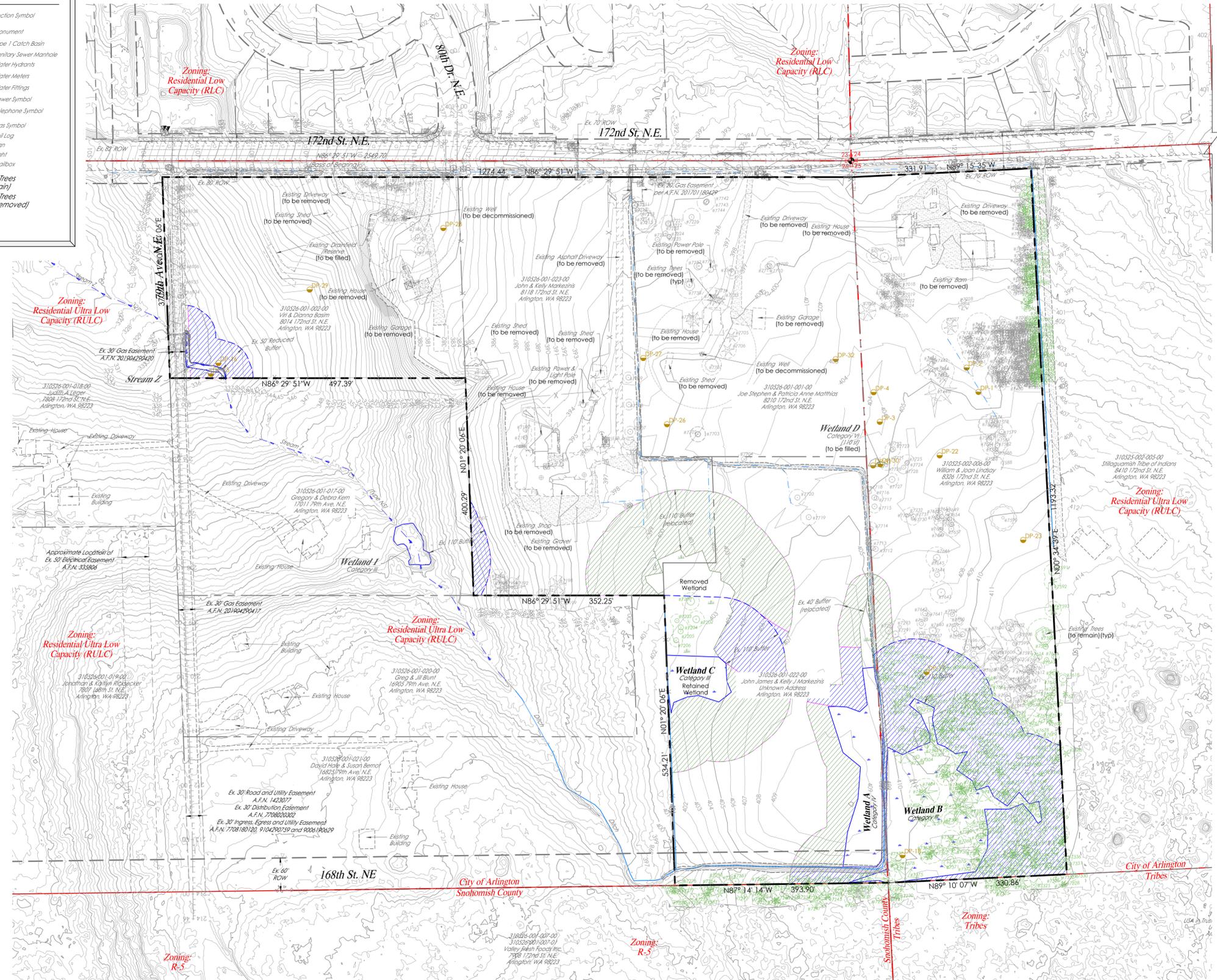
# Appendix B – Grading Plans

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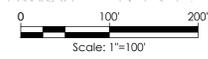
A PORTION OF SECTION 25 & 26, TOWNSHIP 31 NORTH, RANGE 5 EAST, W.M.

**LEGEND**

- Boundary Line
- Existing Section Line
- Existing Right-of-Way Line
- Existing Lot Line
- Existing Easement Line
- Existing Road Centerline
- Existing Edge of Asphalt
- Existing Sidewalk
- Existing Major Contour Line
- Existing Minor Contour Line
- Existing Storm Drainage Line
- Existing Creek Line
- Existing Ditch Line
- Existing Sanitary Sewer Line
- Existing Water Line
- Existing Fence
- Existing Power Line
- Existing Telephone Line
- Existing Gas Line
- Existing Wetland
- Existing Wetland Removed
- Existing Wetland Buffer
- Existing Wetland Buffer Removed
- Existing Section Symbol
- Existing Monument
- Existing Type 1 Catch Basin
- Existing Sanitary Sewer Manhole
- Existing Water Hydrant
- Existing Water Meters
- Existing Water Fittings
- Existing Power Symbol
- Existing Telephone Symbol
- Existing Gas Symbol
- Existing Soil Log
- Existing Sign
- Existing Light
- Existing Mailbox
- Existing Trees (to remain)
- Existing Trees (to be removed)



EXISTING CONDITIONS MAP (EAST OF 79TH AVE. N.E.)



**AQUIFER RECHARGE/  
WELL HEAD PROTECTION**  
Low, Over 100

**SOILS**  
Tokul Gravelly Medial Loam;  
Hydrologic Soil Group: B  
McKenna Gravelly Silt Loam  
Hydrologic Soil Group: D  
Compact Fill Area to 95% Modified Proctor

**CALL AT LEAST 2  
BUSINESS DAYS  
BEFORE YOU DIG  
1-800-424-5555**

CONSTRUCTION DRAWING APPROVAL  
THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED  
PER THE CONDITIONS ON THE TITLE SHEET.  
BY: \_\_\_\_\_  
DEVELOPMENT SERVICES MANAGER  
DATE: \_\_\_\_\_  
THIS APPROVAL VALID FOR 18 MONTHS

**LAND TECHNOLOGIES**  
18820 Third Avenue, N.E.  
Arlington, WA 98223  
360-652-9727

**LAND TECHNOLOGIES**  
MAKING A WAY OUT OF NO WAY

**PROFESSIONAL ENGINEER**  
S. FOSTER  
STATE OF WASHINGTON  
50326  
85281855

PROJECT LEAD: Alexie  
CHECKED BY: Tyler  
DRAWN BY: Mica, Alex  
DATE: \_\_\_\_\_  
REVISION 1: \_\_\_\_\_  
REVISION 2: \_\_\_\_\_  
REVISION 3: \_\_\_\_\_  
REVISION 4: \_\_\_\_\_  
AS-BUILT: \_\_\_\_\_

**MJS Investors**  
Lindsay Subarea Plan  
7530 172nd St. N.E., Arlington, WA 98223  
A PORTION OF SECTION 25 & 26, TOWNSHIP 31 NORTH, RANGE 5 EAST, W.M.

**EXISTING CONDITIONS MAP**

SHEET  
C3 of C38  
22x34



## Appendix C – Qualifications

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**Project Manager:** Kramer Canup

**Report Preparation By:** Monique Metza

**Map Preparation By:** Gerardo Solorzano Zaragoza

**Document Quality Assurance By:** Morgan Kirsanov

**Kramer Canup** is a Senior Project Manager and Environmental Scientist with 10 years of professional experience. Kramer has a professional background in project management, ecological restoration, vegetation monitoring, invasive plant management, monitoring protocol development, grant writing, tropical ecology, wildlife monitoring and environmental education. He currently manages residential and commercial projects, performs wetland and ordinary high-water delineations and shoreline assessments; conducts environmental code analysis and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the planning and permitting processes. His noteworthy experiences include supporting clients with navigating environmental regulations related to land use and development, managing wetland and riparian restoration projects, leading wetland and ordinary high water delineations throughout the Puget Sound region, and instructing study abroad courses in the Peruvian Amazon for the University of Washington.

*Education:* Bachelor of Arts in Environmental Studies with a minor in Ecological Restoration from the University of Washington. *Professional Trainings:* Basic Wetland Delineator Training with the Wetland Training Institute 40-hour USACE wetland delineation training. Kramer has been formally trained through the Washington State Department of Ecology, Coastal Training Program, How to Determine the Ordinary High Water Mark, Using the Washington State Wetland Rating System (2014), and Using the Credit-Debit Method for Estimating Mitigation Needs.

**Monique Metza** is a Staff Scientist III/ Junior Project Manager with 8 years of professional experience. Monique has a background in Wildlife Biology, Ecology and Conservation. She currently supports Soundview in wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects. Her noteworthy experiences include analyzing large datasets to understand bat activity and the potential presence of disease in bat populations during winter seasons, collecting environmental samples to determine presence of the White-nose syndrome causing fungus in outdoor recreation areas, translocation of bighorn sheep to decrease prevalence of pneumonia in domestic and wild populations, and managing public lands to ensure Peregrine falcon nest success over multiple years.

*Education:* Master of Arts and Science in Biology from the college of William & Mary, Virginia. Bachelor of Science in Organismal Biology from Montana State University, Bozeman. *Professional Licenses/Certifications:* Desktop GIS (Pace University). Wildlife Chemical Restraint and Immobilization Certification (Center for Wildlife Studies). Animal Health Certification (Baldy View Regional Occupational Program). Animal Science Certification (Baldy View Regional Occupational Program). *Professional Trainings:* Wildland Firefighter Type 2 (USFS). *Qualified Author and Scientist Lists:* 2022 Summer Acoustic Bat Monitoring Field Report, Devils Tower National Monument. National Park Service. 2021 Summer Acoustic Bat Monitoring Field Report, Devils Tower National Monument. National Park Service. *Publications:* Metza, M.L., Swaddle, J.P., (2024). Bats and Rockreation: is

recreation a vector of *Pseudogymnoascus destructans* at Devils Tower National Monument?  
[Unpublished master's thesis]

**Gerardo Solorzano Zaragoza** has been a licensed Architect in Mexico since 2016, with 7 years of professional experience. Gerardo has a background in Architectural design for residential structural and industrial design. Currently he works with landscape, mitigation, tree assessment, and grading plans. Experience includes 7 years of AutoCAD and more than 11 years as a student using Architectural CAD programs for all types of processes.

*Education:* Bachelor of Architecture from Mexico Colima State University & specialty of Design and History of Art (2016). *Professional training:* 6 months Architectural design company (Punto Arquitectura Guadalajara Mexico, 2015) 6 months Architectural design company (Dcasa, Colima Mexico, 2015), Using professional blueprints, engineer calculations, CAD programs & files, structural & installations.

**Morgan Kirsanov** is an Environmental Scientist III with 6 years of professional experience. She has a background in marine and freshwater ecology, wildlife and natural resource assessments, and monitoring wetland and riparian habitat restoration sites in the Pacific Northwest. She currently assists with performing wetland, stream, and shoreline delineations and fish and wildlife habitat assessments, conducting environmental code analysis, and preparing and/or providing final quality assurance/control for various types of scientific reports and permits for agency submittal. Her noteworthy experiences include analyzing datasets for wetland hydrology monitoring, collecting eDNA samples from streams for analysis, providing document quality assurance on critical area reports, mitigation plans, and permitting documents prior to submittal, and assisting with Endangered Species Act documentation for federal permit submittals.

*Education:* Bachelor of Science degree in Biology with Marine Emphasis from Western Washington University, Bellingham. *Professional Training:* 40-hour Wetland Delineation Training (Western Mountains, Valleys, and Coast and Arid West Regional Supplements), Using the 2014 Wetland Rating System, How to Determine the Ordinary High Water Mark, and Using the 2021 Interagency Wetland Mitigation Guidance. *Qualified Author and Scientists Lists:* Pierce County Wetland Specialist.