

CONCEPTUAL MITIGATION PLAN

SE 440TH STREET

AUGUST 2025



Soundview
Consultants

CONCEPTUAL MITIGATION PLAN

SE 440TH STREET

AUGUST 8, 2025

PROJECT LOCATION

24631 & 24515 440TH STREET
ENUMCLAW, WASHINGTON 98022

PREPARED FOR

QUARTERRA

1325 4TH AVENUE, SUITE 1300
SEATTLE, WASHINGTON 98101

PREPARED BY

SOUNDVIEW CONSULTANTS LLC

2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
(253) 514-8952



Soundview
Consultants

Executive Summary

Soundview Consultants LLC (SVC) has been assisting Quarterra (Applicant) with a conceptual mitigation plan for the proposed development of an approximately 13.94-acre site located at 24515, 24631 and 24711 Southeast 440th Street within the City of Enumclaw, King County, Washington. The subject property consists of four tax parcels situated in the Southwest ¼ of Section 23, Township 20 North, Range 06 East, W.M. (King County Tax Parcel Numbers 2320069156, 2320069188, 2320069213 and 2320069041).

SVC investigated the subject property for the presence/absence of potentially regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in June and July of 2024. Using current methodology, SVC confirmed a lack of onsite wetland presence. However, one wetland (Wetland 1) and one stream (Stream 1) were identified offsite within 300 feet of the subject property. The project is vested to the City of Enumclaw’s Critical Areas Regulations (Chapter 19.02) in effect during 2024. Wetland 1 is classified as a Category III wetland with low habitat score of 3 points and is subject to a standard 50-foot buffer per Enumclaw Municipal Code (EMC) Table 19.02.090.C, or a 25-foot reduced buffer if wetland buffer enhancement is implemented to provide the same or increased level of functions and protections to the wetland as the non-enhanced standard buffer per EMC 19.02.090.C.3. Offsite Stream 1 is classified as a Type Ns stream and is subject to a standard 25-foot buffer per EMC 19.02.100.C. Additionally, major structures and improvements shall be set back a minimum of 15 feet from the outer edge of any wetland or stream buffer per EMC 19.02.220. No other potentially regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species were observed on or within 300 feet of the subject property.

The Applicant proposes commercial and residential redevelopment of the subject property to include 21 buildings, 8 garages, internal access roads, and associated utilities and infrastructure. The project was carefully designed to avoid impacts to critical areas to the greatest extent feasible by fully utilizing developable upland areas on the southern portion of the site. No impacts to identify critical areas is proposed as part of this project.

The Applicant proposes to reduce the onsite portion of the Wetland 1 buffer from 50 feet to 25 feet as allowed pursuant to EMC 19.02.900.C.4. The existing buffer onsite is degraded by non-native invasive species and consists almost entirely of herbaceous vegetation; as such, the proposed buffer reduction will be coupled with buffer enhancement to provide a net lift in buffer functions and meet the requirements for buffer reduction. See the Conceptual Mitigation Plan in Chapter 3 for additional details.

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

Feature Name	Size (Onsite)	Category /Type ¹	Regulated Under EMC 19.02	Regulated Under RCW 90.48	Regulated Under Clean Water Act
Wetland 1	N/A	III	Yes	Yes	Likely
Stream 1	N/A	Ns	Yes	Yes	Likely

1. Washington State Department of Ecology (WSDOE) wetland rating system (Hruby 2014) per EMC 19.02.090(B); DNR water typing system (WAC 222-16-030) per EMC 19.02.100(C).

Site Map

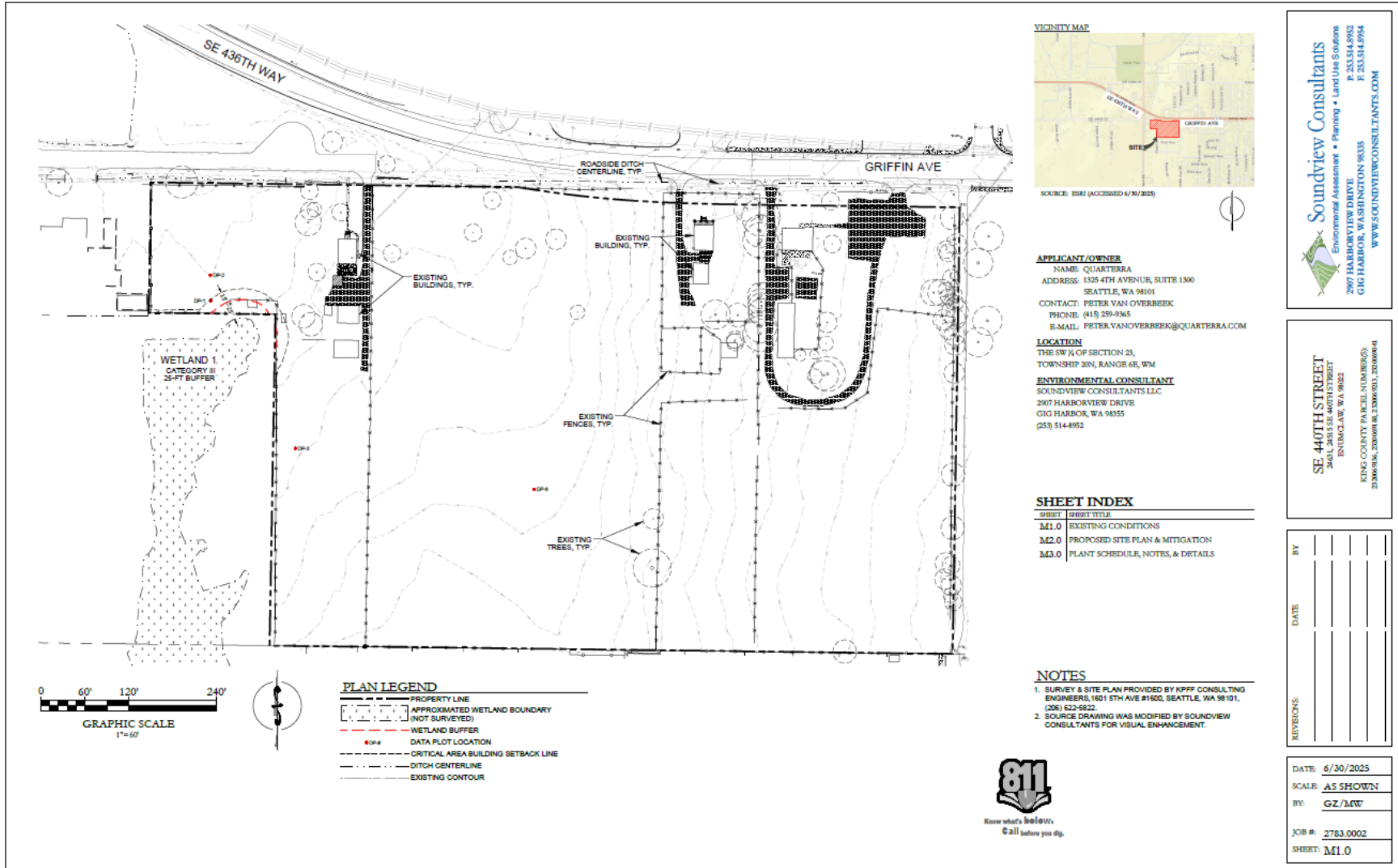


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Chapter 1. Existing Conditions

Soundview Consultants LLC (SVC) has been assisting Prospect Development (Applicant) with a conceptual mitigation plan for the proposed redevelopment of an approximately 13.94-acre site located at 24515, 24631 and 24711 Southeast 440th Street within the City of Enumclaw, King County, Washington. The subject property consists of four tax parcels situated in the Southwest ¼ of Section 23, Township 20 North, Range 06 East, W.M. (King County Tax Parcel Numbers 2320069156, 2320069188, 2320069213 and 2320069041).

The subject property is located in a residential/agricultural setting. The western parcel consists of a single-family residence and pasture, the western central parcel consists of an undeveloped agricultural field, and the two eastern parcels are developed with single-family residences with associated infrastructure including horse stables (eastern central parcel only). The subject property is bounded by Southeast 436th Way/Griffen Avenue to the north, Highpoint Street to the east, high density residential development to the south and low density housing and undeveloped land to the west. The topography on the subject property generally slopes from east to west. Elevations onsite range between approximately 750 feet above mean sea level (amsl) to 715 feet asml. The subject property is located within Water Resource Inventory Area (WRIA) 9 – Duwamish-Green.

Figure 1. Aerial View of the Subject Property



1.1 Critical Area Findings

SVC investigated the subject property during the summer of 2024 for any potentially regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species on or within 300 feet of the subject property. SVC confirmed a lack of onsite wetland presence and identified one offsite wetland (Wetland 1) and one offsite Stream (Stream 1) within 300 feet of the subject property. No other potentially regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified within 300 feet of the subject property.

The project is vested to the City of Enumclaw's Critical Areas Regulations (Chapter 19.02) in effect during 2024. Enumclaw Municipal Code (EMC 19.02.090.B.) has adopted the 2014 wetland rating system for western Washington (Hruby, 2014). Wetland 1 is rated as a Category III wetland with a low habitat score of 3 points. Category III wetlands are wetlands with a moderate level of functions, as characterized by a score ranging from 16 to 19 points. Generally, these wetlands have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

Per EMC 19.02.100.C Stream 1 is classified as a Type Ns waterbody and is subject to a standard 25-foot buffer that should not project onto the subject property due to the stream being located approximately 270 feet offsite to the north and being interrupted by multiple paved roadways.

No other potentially regulated wetlands, waterbodies, or fish and wildlife priority habitats and 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: Southeast 440th Street* report by SVC dated November 21, 2024.

1.2 Regulatory Considerations

1.2.1 Local Buffer Requirements

EMC Table 19.02.090.C establishes wetland buffers based on the wetland rating. Wetland 1 is classified as Category III wetlands are subject to a standard 50-foot buffer per EMC Table 19.02.090.C; although, the buffer may be reduced to 25 feet if wetland buffer enhancement is implemented and the reduced buffer provides the same or increased level of functions and protections to the wetland as the non-enhanced standard buffer per EMC 19.02.090.C.4.

Per EMC 19.02.100.C Stream 1 is classified as a Type Ns waterbody and is subject to a standard 25-foot buffer that should not project onto the subject property due to the stream being located approximately 270 feet offsite to the north and being interrupted by multiple paved roadways.

The standard wetland and stream buffer width are presented in Table 1 below.

Per EMC 19.02.220.B.1, major structures and improvements shall be set back a minimum of 15 feet from the outer edge of any wetland or stream buffer.

Table 1. Wetland and Stream Buffer Summary

Wetland	Category/ Type	Standard Buffer Width	Reduced Buffer Width
Wetland 1	III	50	25
Stream 1	Ns	25	N/A

1. EMC 19.02.090– Wetland Buffer Requirements for Western Washington.
2. EMC 19.02.100.C- Standard stream buffers.

1.2.2 State Regulations

Wetland 1 and Stream 1 are natural surface waters that are likely regulated 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 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.*

Wetland 1 is an isolated depressional wetland. Hydrology from Wetland 1 drains to an artificially constructed agricultural ditch that terminates prior to reaching the series of connected roadside/ agricultural ditches and lacks a surface water connection to nearby ditches potentially draining to offsite Stream 1 and Newaukum Creek. Thus, Wetland 1 is not likely regulated under the CWA. Stream 1 is likely regulated under the CWA because Stream 1 flows into Newaukum Creek, which flows into the Green River, thus the stream has a direct surface water connection to the Green River, which is a WOTUS.

Chapter 2. Proposed Project

2.1 Purpose and Need

The purpose of the proposed project is to provide additional housing units and commercial space within the City of Enumclaw to help alleviate the shortage of residences and increase need for commercial space in the greater Enumclaw area.

2.2 Project Description

The Applicant proposes commercial and residential redevelopment of the subject property to include 21 buildings, 8 garages, internal access roads, and associated utilities and infrastructure. The project was carefully designed to avoid impacts to critical areas to the greatest extent feasible by fully utilizing developable upland areas on the southern portion of the site. No impacts to identify critical areas is proposed as part of this project.

The Applicant proposes to reduce the onsite portion of the Wetland 1 buffer from 50 feet to 25 feet as allowed pursuant to EMC 19.02.900.C.4. The existing buffer onsite is degraded by non-native invasive species and consists almost entirely of herbaceous vegetation; as such, the proposed buffer reduction will be coupled with buffer enhancement to provide a net lift in buffer functions and meet the requirements for buffer reduction.

2.3 Site Planning

2.3.1 Mitigation Sequencing

Under EMC 19.02.230. B, projects should first attempt to avoid impacts all together by not taking certain actions. If actions cannot be eliminated, impacts should be minimized by restraining the magnitude of an action, using different technology or by taking steps to avoid or reduce impacts. For impacts that cannot be avoided or minimized, compensation or rectification for the impact should be provided by replacing, enhancing, or providing substitute resources or environments, followed by monitoring and reduction of the impact over time. The proposed project mitigation actions are quantified in Chapter 3. Mitigation sequences for critical areas is as follows:

- a. *Impact avoidance: avoiding the impact altogether by not taking a certain action or parts of an action. When it has been demonstrated, to the satisfaction of the administrator, that impact avoidance is neither practical nor prudent, the administrator shall approve one of the following, in descending order of preference;*

The Applicant proposes commercial and residential redevelopment of the subject property to include 21 buildings, 8 garages, internal access roads, and associated utilities and infrastructure. The project was carefully designed to avoid impacts to critical areas to the greatest extent feasible by fully utilizing developable upland areas; no direct impacts to critical areas are proposed.

- b. *Impact minimization: minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*

The proposed project has been designed to minimize impacts to the greatest extent feasible by complying with the criteria for buffer reduction specified in EMC 19.02.090.C.4. Additionally, appropriate best management practices (BMPs) and temporary erosion and sediment control (TESC) measures will be implemented for the duration of project activities to minimize potential construction impacts, and fencing and critical areas signage will be installed along the perimeter of the remaining buffer area onsite to minimize intrusion into the critical areas.

- c. *Impact rectification: rectifying the impact by repairing, rehabilitating, or restoring the affected environment. This may include off-site mitigation areas and the restoration of previously impacted habitats in other critical areas; provided, that a watershed approach to mitigation siting (see Ecology Publication No. 09-06-032) is required;*

The Applicant proposes to reduce the onsite portion of the Wetland 1 buffer, as the buffer is currently degraded by non-native invasive species and consists almost entirely of herbaceous vegetation. The proposed buffer reduction from a 50-foot standard buffer down to a 25-foot reduced buffer with wetland buffer enhancement will improve wetland and wetland buffer function through the establishment of a suite of native trees and shrubs, and removal of non-native invasive species. Buffer enhancement will result of 1,169 square feet of planting with an array of native trees and shrubs. Additionally, the applicant proposed to install a row of evergreen trees along the western property boundary to provide additional screening and buffer between the proposed development and the identified offsite wetland.

- d. *Impact reduction over time: reducing or eliminating the impact over time by preservation and maintenance operations;*

No impacts to critical areas are proposed as part of the project. The buffer enhancement actions and installation of trees along the western property boundary will increase shading, improve habitat diversity within the wetland and buffer, reduce the presence of non-native invasive species, and will lead to an overall net lift in ecological function within the wetlands and associated buffers over an extended period so time.

- e. *Impact compensation: compensating for the impact by replacing, enhancing, or providing substitute resources or environments.*

The onsite portion of the Wetland 1 buffer will be enhanced with a suit of native trees and shrubs, as the buffer is currently degraded by non-native invasive species and consists almost entirely of herbaceous vegetation. The proposed buffer enhancement and proposed row of evergreen trees is anticipated to increase ecological functions site and provide a protective buffer between the proposed development and offsite critical area.

- f. *Monitoring the impact and taking appropriate corrective measures.*

The existing buffer onsite is currently degraded due to large mowed herbaceous areas presence of invasive species. The proposed mitigation plan includes decompaction of soils, removal of non-native invasive species identified within the buffer, and replanting with native species. Five years of buffer monitoring will be conducted to document the

success of mitigation as well as any additional steps or remedial actions which are implemented in order for the mitigation site to meet goals and performance standards.

2.3.2 Buffer Reduction

2.3.3 Activities Allowed Within Wetlands

Per EMC 19.02.090.C.4 applicant may request the administrator's approval of a buffer reduction plan that is based upon the condition of the vegetation in the existing buffer, the slope of the land adjacent to the buffer, the proposed land use, the risk of negative impacts to the buffer and wetland, and the opportunity for wildlife and fish species to use the buffer habitat.

- a. *To evaluate an applicant's request for buffer reduction, the administrator will require the applicant to submit a "Buffer Risk and Opportunity Assessment" (see Appendix F of this chapter) completed by a qualified professional to evaluate the request using real data.*

The "Buffer Risk and Opportunity Assessment" form has been requested by the city. However, it has been determined that this form is not required. The proposed mitigation actions are intended to increase ecological functions site and provide a protective buffer between the proposed development and offsite critical area. The reduced buffer is proposed to ensure enough suitable area for building requirements.

- b. *If the assessment rating supports the applicant's request for buffer width reduction and/or variable width buffers, the administrator will make a decision to allow buffer reduction, with or without mitigation. The range of potential buffer widths is shown in Table 19.02.090(C) – Buffer Widths.*

The existing onsite buffer projected by offsite Wetland 1 degraded by non-native invasive species and consists almost entirely of herbaceous vegetation. The proposed reduced buffer will be enhanced by installing native trees and shrubs, and the Applicant has proposed to install a row of evergreen trees along the western portion of the site to provide additional screening and buffer between the offsite wetland the proposed development. The mitigation action within the reduced buffer and installation of the row of evergreen trees is anticipated to increase shading, water quality and habitat complexity and resources onsite to improve ecological functions.

2.5 Authorizations

Proposed buffer enhancement may require coordination and authorization from the local agency (City of Enumclaw). No direct or indirect impacts to wetlands or streams are proposed, and no authorizations from WSDOE and USACE are necessary.

Chapter 3. Conceptual Mitigation Plan

SVC investigated the subject property for the presence/absence of potentially regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in June and July of 2024. SVC confirmed a lack of onsite wetland and stream presence. However, one wetland (Wetland 1) and one stream (Stream 1) were identified offsite within 300 feet of the subject property. The proposed project does not require impacts to offsite features; however, the buffer of Wetland 1 does project onto the northwest portion of the site. The onsite mitigation actions attempt to closely adhere to local critical areas regulations specified in EMC 19.02.240 while also utilizing the best available science. The proposed mitigation actions are intended to enhance the existing degraded buffer 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 the overall Green-Duwamish watershed. The project proposes buffer enhancement to improve and uplift ecological functions on the site in the currently degraded buffer. This chapter presents the mitigation details for the proposed residential and commercial redevelopment project. The Conceptual Mitigation Plan depicting existing conditions, proposed impacts, and onsite mitigation actions is included in Appendix A.

3.1 Mitigation Strategy

3.1.1 Buffer Enhancement

The proposed buffer enhancement actions include removing non-native invasive species and replanting them with native trees and shrubs, as needed, to improve ecological functions within the onsite buffer area (1,169 square feet). Proposed buffer enhancement areas and planting plan are depicted on Sheets 2 and 3 of Appendix A.

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 and proposed development. 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 onsite.

The proposed mitigation 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;
- Removal of all trash, refuse, and debris within the wetland buffer;
- Replant all onsite buffer enhancement 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.

3.2 Approach and Best Management Practices

Enhancement of the disturbed buffer should occur immediately after grading is complete. Temporary erosion and sediment control (TESC) measures will be implemented that consists of high-visibility fencing (HVF) installed around native vegetation along perimeter of the buffers, silt fencing between the graded areas and buffers, 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 will be kept out of the critical areas and buffers, and the area will need to be kept free of spills and/or hazardous materials. All fill material and road surfacing will be sourced from upland areas onsite or from approved suppliers and will be free of pollutants and hazardous materials. Construction materials along with all construction waste and debris will 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 will be cleaned, and detail graded using hand tools wherever necessary, and TESC measures will be removed.

3.3 Goals, Objectives, and Performance Standards

The goals and objectives for the onsite mitigation are based on increasing wetland buffer functions compared to the current degraded condition. Buffer enhancement of the onsite degraded buffer will increase habitat functions and provide greater screening and protection for the offsite wetland area. These actions are capable of increasing existing water quality and hydrologic functions and providing a moderate level of habitat function for wetland-associated wildlife. The goals and objectives of the proposed mitigation actions are as follows:

Goal 1– Improve and protect offsite wetland functions by enhancing wetland buffer area onsite.

Objective 1.1 – Improve the modified buffer area through 1,169 square feet of buffer enhancement with native trees and shrubs to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

Performance Standard 1.1.1 – By the end of Year 5, the mitigation area will have at least 2 species of native trees and 4 species of native shrubs; native volunteer species will be included in the count. To be considered, the native species must make up at least 5 percent of the vegetation class.

Performance Standard 1.1.2 – Minimum survivorship of the installed plants in the mitigation area will be 100 percent at the end of Year 1 (replacement of lost plants allowed).

Performance Standard 1.1.3 – Minimum percent cover of native woody plants in the mitigation area will be 30 percent at the end of Year 2, 40 percent at the end of Year 3, and 50 percent at the end of Year 4, and 60 percent at the end of Year 5.

Performance Standard 1.1.4 – Non-native invasive plants will not make up more than 20 percent total cover in any growing season during the monitoring period following Year 1 through Year 5. State-listed, Class A noxious weeds must be completely eliminated from the mitigation area in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 20 percent areal cover in the wetland buffer areas in all monitoring years.

3.4 Plant Materials and Installation

Plant Materials

All plant materials to be used for mitigation actions will be nursery grown stock from a reputable, local source. Only native species are to be used; no hybrids or cultivars will 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 will 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.

Fertilizer will be in the form of Agriform plant tabs or an approved like form. Mulch will 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 from the land clearing activities.

Plant Scheduling, Species, Size, and Spacing

Plant installation should occur as close to conclusion of the residential plat construction activities as possible to limit erosion and limit the temporal loss of function provided by the wetlands and buffers. All planting should 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 prior to installation, either at the nursery or at the time of delivery if a nursery inspection is not feasible. 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 should be delivered in original, unopened, and undamaged containers showing weight, analysis, and name of manufacturer. This material should 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 should 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 will 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 root mass, and the depth of the pit should accommodate the entire root system.

Broken roots should be pruned with a sharp instrument and rootballs should 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 should 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 buffers. The pre-treatment with herbicide should 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 EMC 19.02 Appendix C.E. 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 wetland mitigation actions will require continued monitoring and maintenance to ensure the mitigation actions are successful. Therefore, the buffer enhancement area will be monitored for a period of five 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, 4, and 5. Closeout monitoring will occur in Year 5 for the buffer enhancement area to ensure the success of the mitigation actions.

Monitoring will consist of percent cover measurements at permanent monitoring stations, walk-through surveys to identify invasive species presence and dead or dying mitigation plantings, photographs taken at fixed photo points, wildlife observations, and general qualitative habitat and wetland function observations.

To determine percent cover, observed vegetation will be identified and recorded by species and an estimate of areal cover of dominant species within each sampling plots. Circular sample plots, approximately 30 feet in diameter (706 square feet), are centered at each monitoring station. The sample plots encompass the specified wetland areas and terminate at the observed wetland boundary. Trees and shrubs within each 30-foot diameter monitoring plot are then recorded to species and areal cover. Herbaceous vegetation is sampled from a 10-foot diameter (78.5 square feet) within each monitoring plot, established at the same location as the center of each tree and shrub sample plot. Herbaceous vegetation within each monitoring plot is then recorded to species and includes an estimate of percent areal cover. A list of observed tree, shrub, and herbaceous species including percent areal cover of each species and wetland status is included within the monitoring report.

3.6 Reporting

Following construction an as-built report will be submitted to the City. Additionally, a monitoring report detailing the current ecological status of the mitigation actions, measurement of performance standards, and management recommendations will be prepared and submitted to the City within 90 days of each monitoring event to ensure full compliance with the mitigation plan.

3.7 Contingency Plan

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 City 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.

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 a separate tract in which development is prohibited or by execution of an easement dedicated to the City of Enumclaw, a conservation organization, land trust, or similarly preserved through a permanent protective mechanism acceptable to the city. 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 King County recording department.

3.9 Financial Assurances

Under EMC 19.02.180, 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.

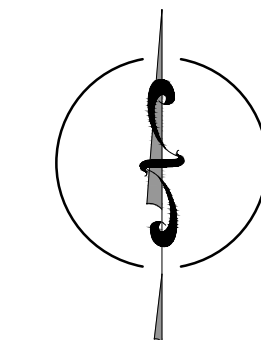
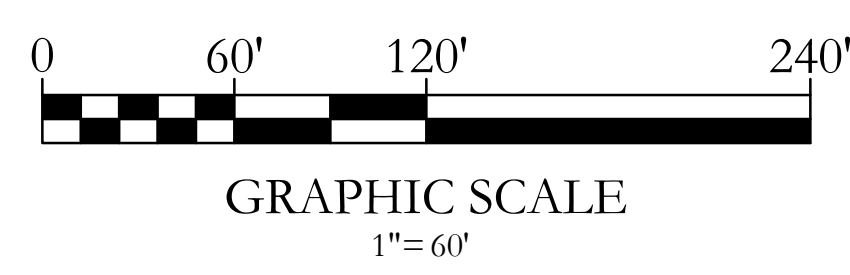
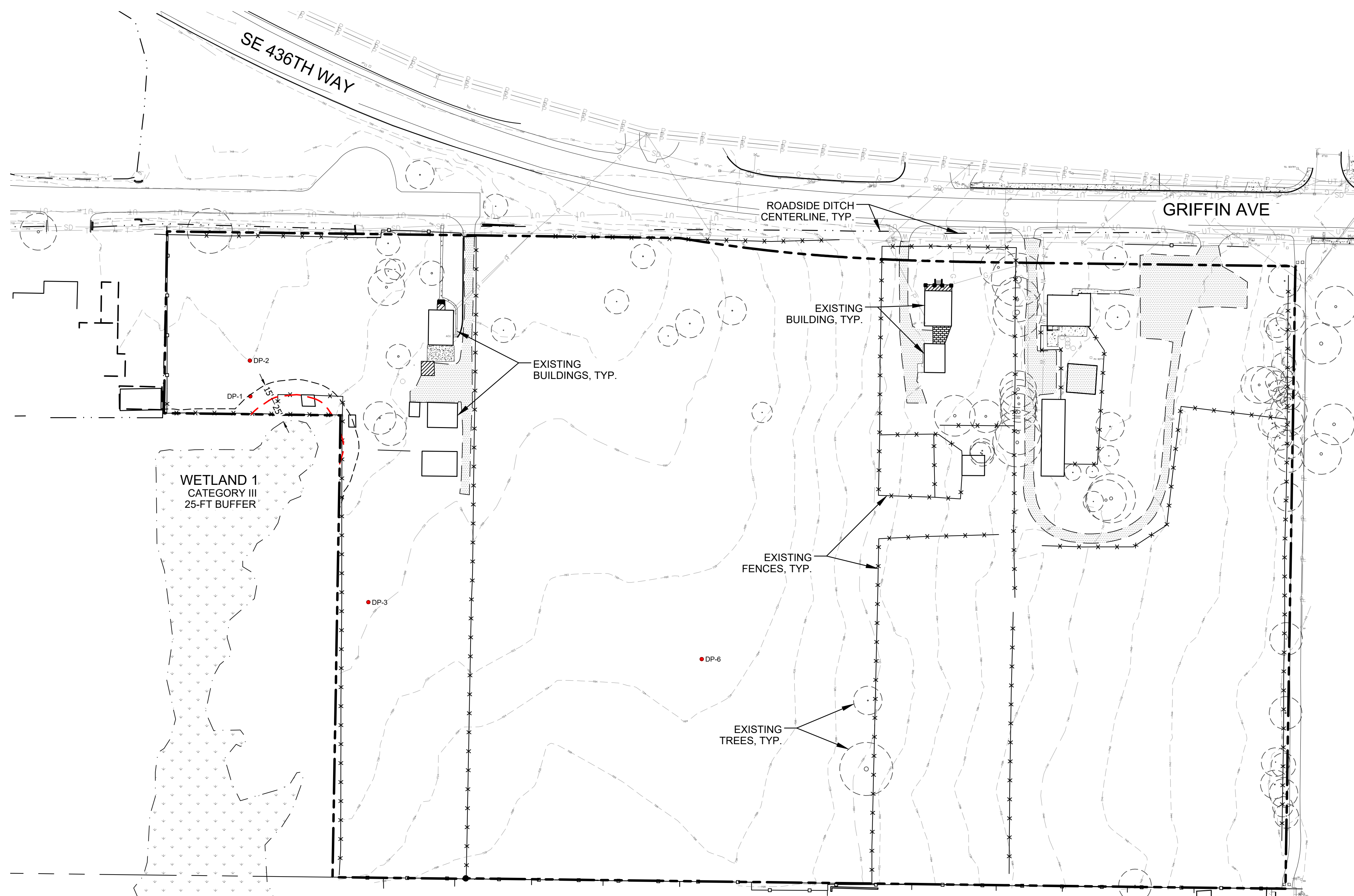
Chapter 4. Closure

The findings and conclusions documented in this report have been prepared for specific application for the Southeast 440th Street 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 operational 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

- Federal Geographic Data Committee. 2013. *Classification of Wetlands and Deepwater Habitats of the United States*. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C
- Hruby, T. & Yahnke, A. 2023. *Washington State Wetland Rating System for Western Washington: 2014 Update (Version 2)*. Washington State Department of Ecology Publication #23-06-009..
- Enumclaw Municipal Code (EMC). 2024. Chapter 19.02 — Critical Area Regulations. Website: <https://www.codepublishing.com/WA/Enumclaw/#!/Enumclaw19/Enumclaw1902.html#19.02/>. Current through February 25, 2025.
- Soundview Consultants LLC (SVC). 2024. *Wetland and Fish and Wildlife Habitat Assessment: Southeast 440th Street*. November 21, 2024. Gig Harbor, Washington.
- Supreme Court of the United States. *Sackett Et Ux. V Environmental Protection Agency Et Al*. May 25, 2023. <https://www.epa.gov/system/files/documents/2023-05/Sackett%20Opinion.pdf>.
- United States Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Ver2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.
- USACE and Environmental Protection Agency (EPA). 2023a. “Revised Definition of Waters of the United States.” 88 FR 3004. January 18, 2023.
- USACE and EPA. 2023b. Revised Definition of “Waters of the United States”; Conforming. Final Rule. Federal Register. Volume 88, Number 173 (33 CFR Part 328, 40 CFR Part 120). September 8, 2023.

Appendix A – Existing Conditions and Proposed Exhibits



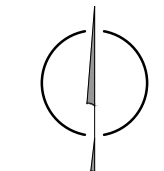
PLAN LEGEND

	PROPERTY LINE
	APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED)
	WETLAND BUFFER
	DATA PLOT LOCATION
	CRITICAL AREA BUILDING SETBACK LINE
	DITCH CENTERLINE
	EXISTING CONTOUR

VICINITY MAP



SOURCE: ESRI (ACCESSED 6/30/2025)



APPLICANT/OWNER

NAME: QUARTERRA
 ADDRESS: 1325 4TH AVENUE, SUITE 1300
 SEATTLE, WA 98101
 CONTACT: PETER VAN OVERBEEK
 PHONE: (415) 259-9365
 E-MAIL: PETER.VANOVERBEEK@QUARTERRA.COM

LOCATION

THE SW 1/4 OF SECTION 23,
 TOWNSHIP 20N, RANGE 6E, WM

ENVIRONMENTAL CONSULTANT

SOUNDVIEW CONSULTANTS LLC
 2907 HARBORVIEW DRIVE
 GIG HARBOR, WA 98355
 (253) 514-8952

SHEET INDEX

SHEET	SHEET TITLE
M1.0	EXISTING CONDITIONS
M2.0	PROPOSED SITE PLAN & MITIGATION
M3.0	PLANT SCHEDULE, NOTES, & DETAILS

NOTES

- SURVEY & SITE PLAN PROVIDED BY KPFF CONSULTING ENGINEERS, 1601 5TH AVE #1600, SEATTLE, WA 98101, (206) 622-5822.
- SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



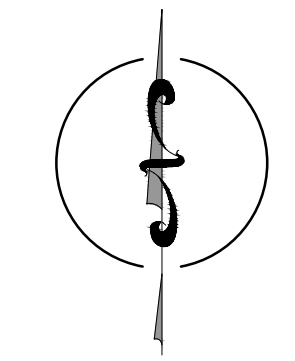
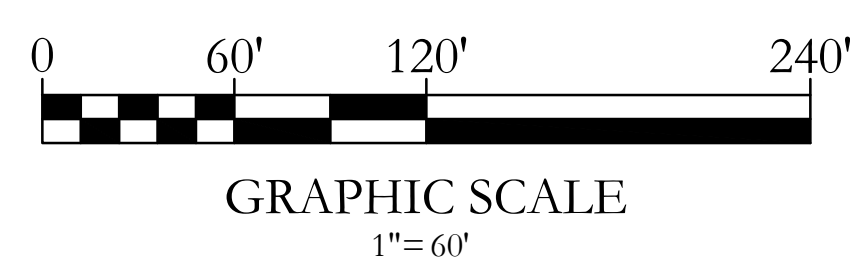
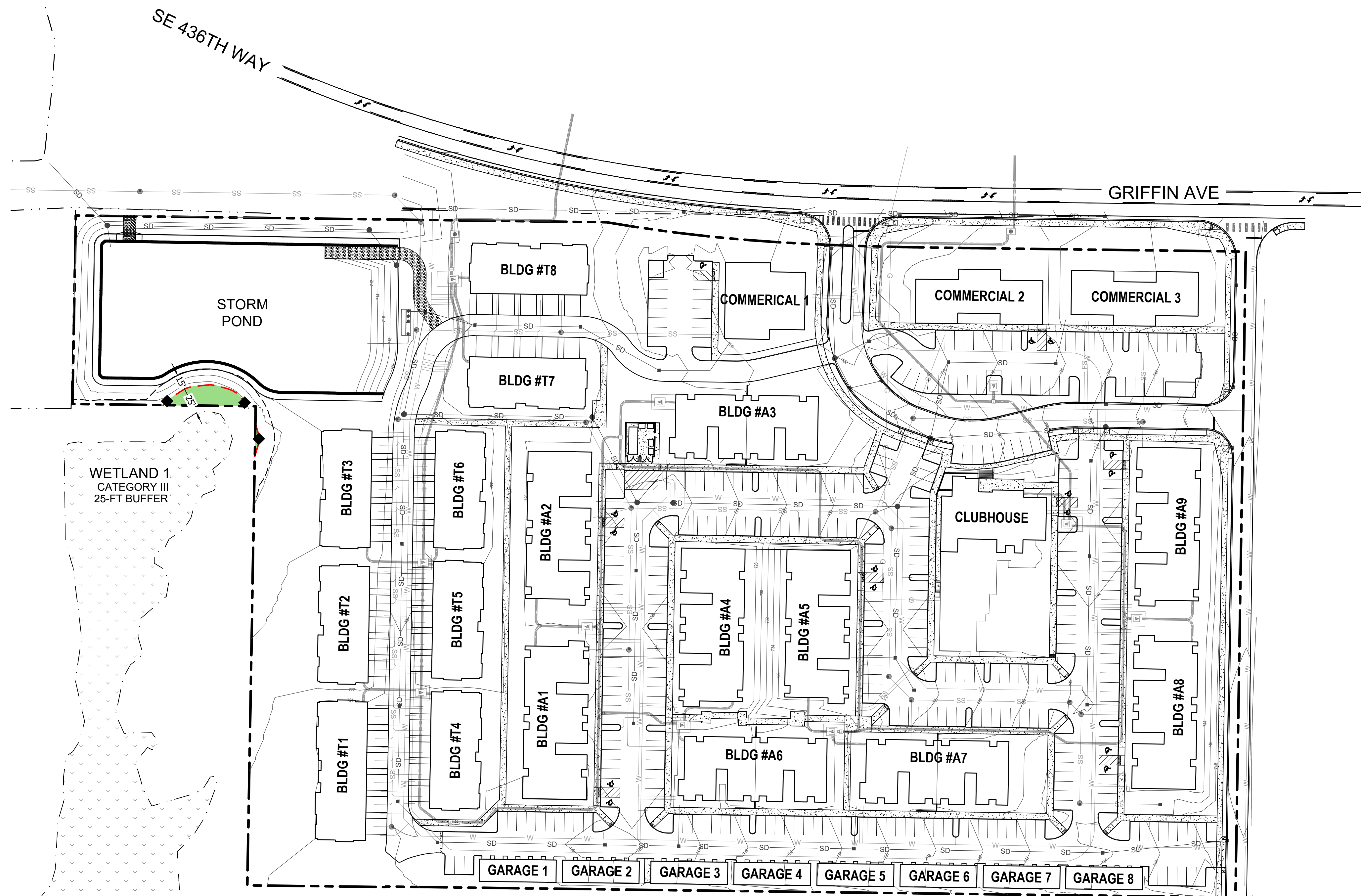
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 Environmental Assessment • Planning • Land Use Solutions
 P. 253.514.8952 F. 253.514.8954
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 GIG HARBOR, WASHINGTON 98335
 WWW.SOUNDVIEWCONSULTANTS.COM

SE 440TH STREET
 24631, 24515 SE 440TH STREET
 ENUMCLAW, WA 98022
 KING COUNTY PARCEL NUMBER(S):
 2320060156, 2320060188, 2320060213, 2320060241

REVISIONS:	DATE	BY

DATE:	6/30/2025
SCALE:	AS SHOWN
BY:	GZ/MW
JOB #:	2783.0002
SHEET:	M1.0

S:\CURRENT\2025\2783\2783.0002 SE 440th Street\Graphics & Maps\CadVA - CURRENT_SVC_DRAWINGS\VA - Current Base\DWG\2783.0002 (2025-06) Base.dwg
 Plotted July 2, 2025

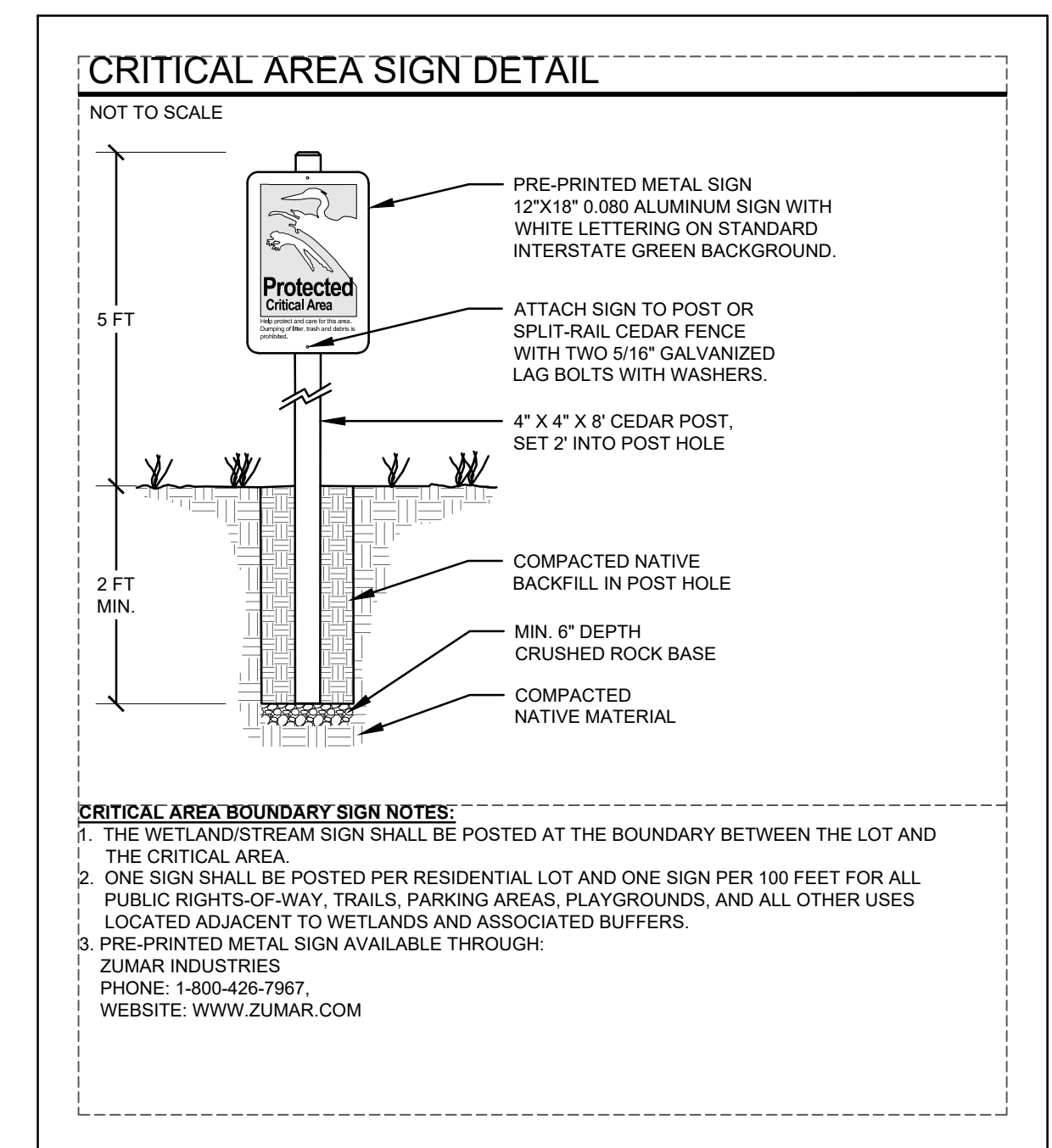
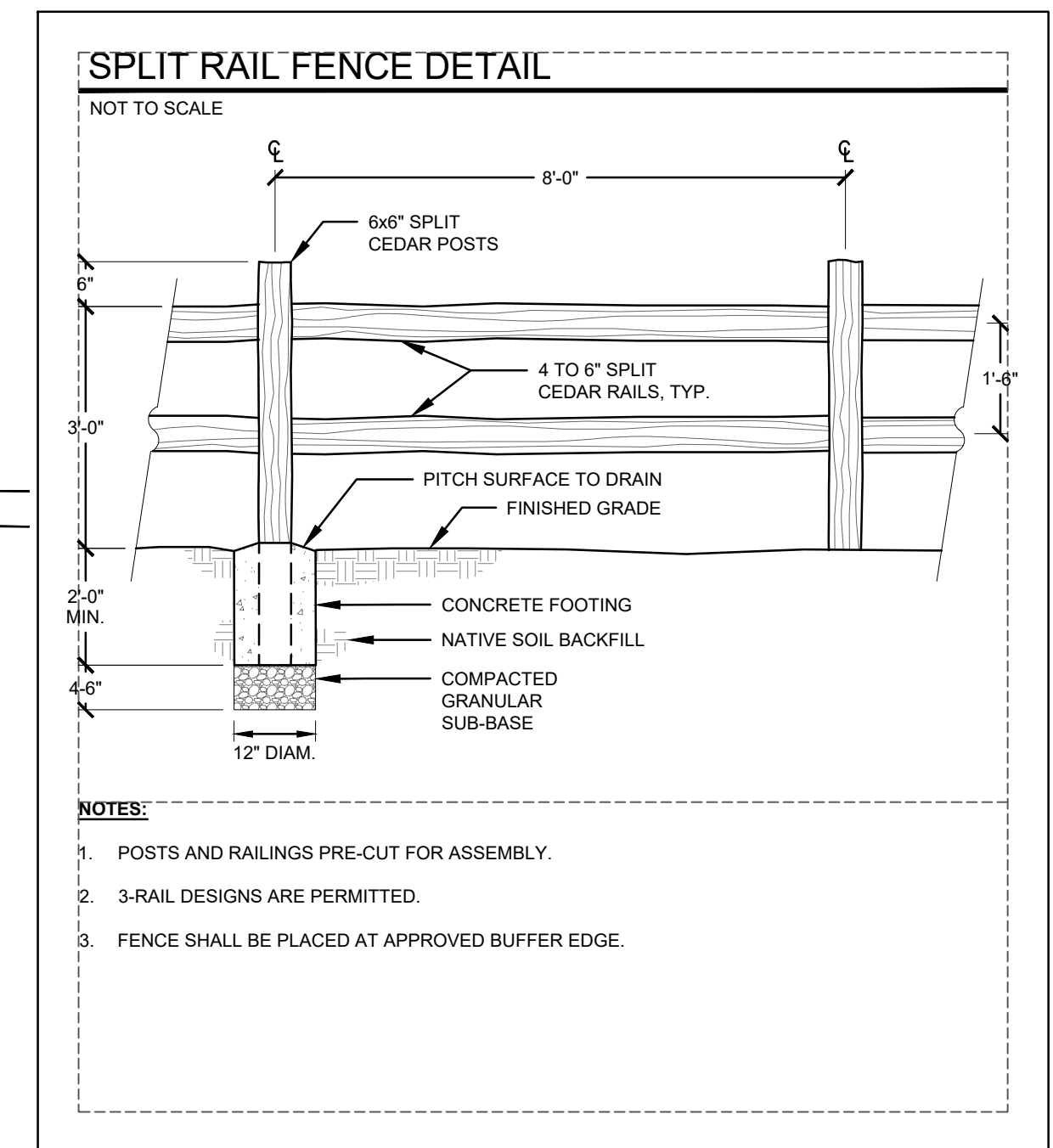


PLAN LEGEND

	PROPERTY LINE
	APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED)
	CRITICAL AREA BUILDING SETBACK LINE
	DITCH CENTERLINE
	EXISTING CONTOUR

MITIGATION LEGEND

BUFFER MITIGATION	
	BUFFER ENHANCEMENT 1,169 SF
FENCES & SIGNS	
	POST-CONSTRUCTION BUFFER/ CRITICAL AREA FENCE 126 LF
	CRITICAL AREA SIGN 3 SIGNS



- NOTES**
- SURVEY & SITE PLAN PROVIDED BY KPFF CONSULTING ENGINEERS, 1601 5TH AVE #1600, SEATTLE, WA 98101, (206) 622-5822.
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SE 440TH STREET
24631, 24515 SE 440TH STREET
ENUNICLAW, WA 98022

KING COUNTY PARCEL NUMBER(S):
2320060156, 2320060188, 2320060213, 2320060241

REVISIONS:	DATE	BY

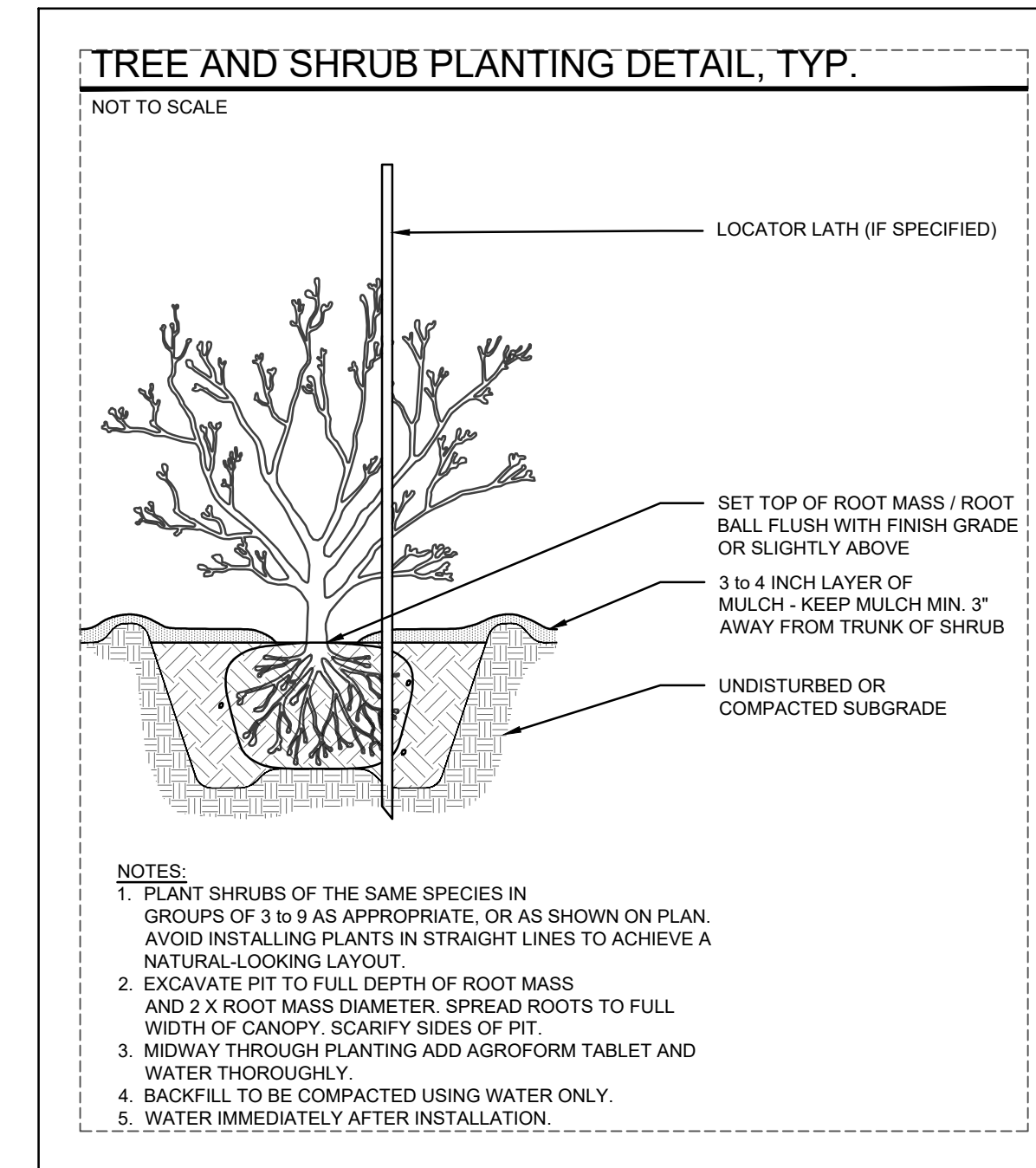
DATE:	6/30/2025
SCALE:	AS SHOWN
BY:	GZ/MW
JOB #:	2783.0002
SHEET:	M2.0

AS CURRENTLY SHOWN ON THESE PLANS, THE EXISTING WETLANDS AND ASSOCIATED BUFFERS ARE BASED ON THE DATA PROVIDED BY THE CLIENT AND THE DATA PROVIDED BY SOUNDVIEW CONSULTANTS. THE DATA WAS OBTAINED FROM THE KING COUNTY GIS DATA CENTER. THE DATA WAS OBTAINED FROM THE KING COUNTY GIS DATA CENTER. THE DATA WAS OBTAINED FROM THE KING COUNTY GIS DATA CENTER.
Printed July 2, 2025

PLANT SCHEDULE

		Area (sf):	1,169				
		Cov'g (%):	100				
		Trees (%):	50				
		Shrubs (%):	50				
Scientific Name	Common Name	WL Status	AREA 1	Spacing (min.)	Height (min.)	Size (min.)	Planting Area
TREES			(Qty)				
<i>Acer macrophyllum</i>	bigleaf maple	FACU	2	10 ft	3 ft	2 gal	Dry
<i>Pseudotsuga menziesii</i>	Douglas fir	FACU	6	10 ft	3 ft	2 gal	Dry
		Total:	8				
SHRUBS			(Qty)				
<i>Acer circinatum</i>	vine maple	FAC	4	10 ft	4 ft	2 gal	Dry/Moist
<i>Corylus cornuta var. californica</i>	western hazlenut	FACU	4	10 ft	2 ft	2 gal	Moist
<i>Holodiscus discolor</i>	oceanspray	FACU	8	5 ft	2 ft	1 gal	Dry
<i>Rosa gymnocarpa</i>	bald hip rose	FACU	13	4 ft	2 ft	1 gal	Dry/Moist
		Total:	29				

- 1 - Scientific names and species identification taken from *Flora of the Pacific Northwest, 2nd Edition* (Hitchcock and Cronquist, Ed. by Giblin, 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.



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KING COUNTY PARCEL NUMBER(S):
2320009156, 2320009188, 2320009213, 2320009041

REVISIONS:	DATE	BY

NOTES

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2. SOURCE DRAWING WAS MODIFIED BY SOUNDVIEW CONSULTANTS FOR VISUAL ENHANCEMENT.



DATE: 6/30/2025
SCALE: AS SHOWN
BY: GZ/MW
JOB #: 2783.0002
SHEET: M3.0

Appendix B – Qualifications

Project Manager: Kramer Canup
Report Preparation: Shaun Sweeney
Exhibit Preparation: Matt Wagner
Document Quality Assurance: Joseph Leyda

Kramer Canup is a 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.

Shaun Sweeney is an Environmental Scientist II with 5 years of professional experience. Shaun has a background in wetland and ordinary highwater delineations, wildlife and natural resource assessments, seasonal wetland riparian vegetation monitoring, shoreline and stream assessments in the Pacific Northwest. She currently performs wetland and ordinary highwater delineations, conducting environmental code analysis and prepares environmental assessments. Previously Shaun has managed multiple single family and residential development projects in assisting clients with permitting processes, mitigation planning and implementing regulations within engineering designs. Her noteworthy experiences include supporting clients with navigating environmental regulations related to land use and development, managing mitigation and restoration projects, leading wetland and ordinary high-water delineations throughout the Puget Sound region, and experience in conducted various ecological surveys in varying regions including, Eastern Washington, Alabama, Arizona and while studying abroad in South Africa.

Education: Bachelor of Arts in Environmental Studies with a minor in Geography from Western Washington University. *Professional Certifications:* SDI certified Divemaster, Wetland Delineation Training through USACE, How to Determine the Ordinary High Water Mark, Using the Washington State Wetland Rating System (2014), and How to conduct a Fish Forage Survey. *Qualified Author and Scientists Lists:* Pierce County Wetland Specialist.

Matt Wagner has been a licensed Landscape Architect for 2 years, with 8 years of professional experience. Matt has a background in ecological design, landscape design for multi-family housing,

and residential design-build. Currently he works with mitigation plan sets that include the adjustment, relocation, and enhancement of critical areas. His noteworthy experiences include 8 years of AutoCAD drafting, landscape and mitigation code review, tree assessment and data collection, grading plans, and an expertise in a wide variety of native and non-native plant species.

Education: Landscape Design certificate from Edmonds Community College and a Bachelor of Landscape Architecture from the University of Washington, Seattle. *Professional Certifications:* Licensed Landscape Architect since 2021.

Joseph Leyda, MA, SPWS is a Project Manager and Senior Environmental Scientist with over 20 years of professional experience in Washington and Oregon. Joseph is a certified Senior Professional Wetland Scientist (SPWS) and a design-build restoration specialist. His background includes wetland delineation, installing and maintaining restoration projects, wetland and riparian restoration design, Section 404/401 permitting, JARPA/JPA preparation, wildlife biology, AutoCAD drafting, project management, wetland policy review, environmental law, and business administration. His noteworthy experiences include delineating hundreds of wetlands and miles of linear projects, modeling hydrology for created wetlands, designing restoration plans, monitoring the Point Roberts, Washington great blue heron colony and threatened species, trapping and collaring black-tailed deer for the Oregon Department of Fish and Wildlife, monitoring wetland hydrology in problem and atypical areas, as well as operating his former consulting firm and training junior staff. Joseph graduated with a master's degree in biology from the College of William and Mary in Williamsburg, Virginia. He studied resource management and policy, wetland science, and wetland delineation in graduate school at the College of William and Mary's School of Marine Science at Gloucester Point, Virginia. His higher education began at the University of New Orleans in New Orleans, Louisiana where he earned a Bachelor of Science and studied the ecology of the Mississippi River Delta and herpetology. He is trained in the Washington State Wetland Rating System and in the Oregon HGM and ORWAP functional assessment methodologies. He taught wetland delineation and mitigation at Washington State University in Vancouver, Washington. His consulting experience includes residential civil engineering project management. He is also a licensed falconer in Washington State.

Education: Master of Arts in Biology, College of William & Mary in Virginia. Bachelor of Science in Biological Sciences, University of New Orleans. *Professional Licenses/Certifications:* Senior Professional Wetland Scientist (SPWS). *Professional Trainings:* Sackett Decision, SWS. Using the Revised Washington State Wetland Rating System in Western Washington (2014, v2), WSDOE. Using the Revised Washington State Wetland Rating System in Eastern Washington (2014, v2), WSDOE. Western Washington: How to Determine the Ordinary High Water Mark, WSDOE. Designing and Installing Wetland Mitigation and Restoration Projects, WSDOE. Grass, Sedge, and Rush Identification for Western WA Puget Lowland Habitats, WSDOE. Winter Tree and Shrub Identification, WSDOE. Wetland Functional Assessment, Western Washington University. Upland and Wetland Habitat Restoration Design, University of Washington. Planning Hydrology for Constructed Wetlands, Wetland Training Institute.