

CRITICAL AREAS MITIGATION PLAN (WETLANDS AND HABITAT
CONSERVATION AREAS) FOR
2706 MILL AVENUE PROPERTY

Bellingham, Washington
Parcel No. 370306-102114 and 370306-125113

for
Jess Kenoyer

August 29, 2024

Project 220048



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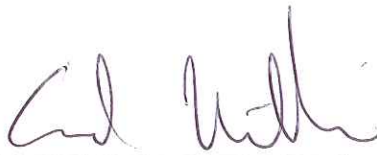
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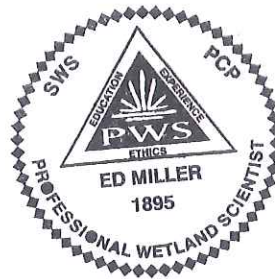
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Author Qualifications

This report was prepared by Ed Miller.

Ed Miller is a senior biologist and owner of Miller Environmental Services, LLC, who specializes in wetlands, wildlife, and habitat assessment. He is a Society of Wetland Scientists certified Professional Wetland Scientist (PWS), #1895. Mr. Miller has obtained a Bachelor of Science in Terrestrial Ecology from Western Washington University in 1993 and a Masters of Environmental Science and Management with a focus on Watershed Management at the University of California at Santa Barbara in 2000. His 19 years of experience includes preparing wetland delineations and reports, wetland functional assessments, stream and shoreline ordinary high water mark determinations, habitat conservation area reports, mitigation design, mitigation monitoring and floodplain habitat assessments for FEMA Endangered Species Act compliance. Mr. Miller has completed project permitting and compliance for agencies including U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), Washington Department of Ecology (Ecology).

Disclaimer

This report, wetland and/or stream delineation, and/or marine ordinary high watermark determination, is based on protocols that are described and defined in manuals and publications utilized by Federal, State, and Local agencies. The wetland delineation methodology used is consistent with the *Washington State Wetlands Identification and Delineation Manual* (Ecology, 1997), the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2010), and subsequent Corps guidance. Ordinary high water mark determinations were performed based on Department of Ecology guidelines from *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Ecology, 2016). This report is based on requirements from the local jurisdiction and any associated policies or code interpretations that have been approved and made available to the public at the time of this report. Completed work is based on conditions at the time of the site visit. No guarantees are given that a delineation determination or assessment will concur exactly with those performed by regulatory agencies or by other qualified professionals.

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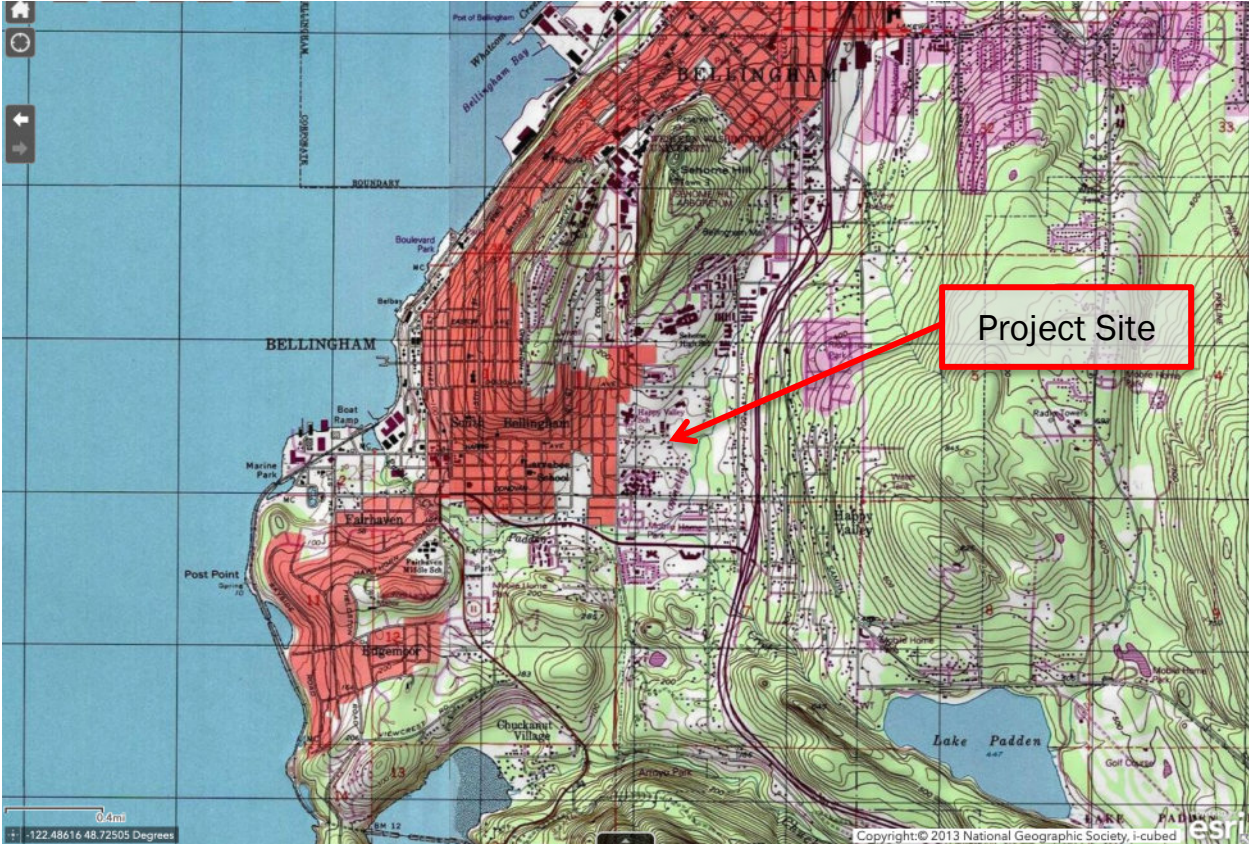
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1.0 INTRODUCTION

At the request of the applicant, Jess Kenoyer, Miller Environmental Services, LLC (MES) completed this mitigation plan for the 2706 Mill Avenue Project on two adjoining properties (tax parcels 370306-102114 and 370306-125113) in Bellingham, Washington; Section 6, Township 37 N, Range 03E, W.M. The parcels are located on the south side of Mill Avenue.

The project location is shown below on **Figure 1**. A map of the subject property and proposed project is included as **Appendix A**.

Figure 1: Vicinity Map



1.1 PURPOSE

This Mitigation Plan was prepared as required by the City of Bellingham 2016 Critical Areas Ordinance (CAO). This report includes mitigation for proposed wetland fill to onsite wetlands and buffer impacts as shown on the site maps in **Appendix A**. A separate wetland delineation was completed and documented in a separate report – *Critical Areas Report: Wetlands and Habitat Conservation Areas for 4054 & 4072 Pacific Highway* (MES, 2022).

2.0 METHODS

2.1 FIELD INVESTIGATION

A site investigation of the review area was conducted on November 1, 2022 to document existing conditions. This included a wetland delineation, an assessment of onsite habitat, and documentation of potential mitigation opportunities. This wetland delineation was documented in a separate report, Critical Areas Report: Wetlands & Habitat Conservation Areas for 2706 Mill Avenue Property (Miller Environmental Services; June 21, 2023). Wetland boundaries and data plot locations were flagged and surveyed by professional land surveyors. Site photographs taken during the site visit are included within **Appendix B**.

3.0 PROJECT AREA SETTING

3.1 WATERSHED

The property is located within the Connelly Creek Watershed, a basin within the Padden Creek Watershed draining to Bellingham Bay - within Water Resource Inventory Area (WRIA) number 01.

The property contains a high area/ridge in the western portion of the site. Generally, a majority of the site drains eastward following the topography into Wetlands A, B and C on the eastern side of the property. A small stream (mapped as Taylor Creek) is located within Wetland A (just offsite to the east), draining water southeastward toward Connelly Creek – located approximately 350 feet east of the property. A small portion of the southwest corner of the property drains southwestward, towards adjacent residences to the south. This water may eventually reach ditches and the stormwater collection system, where it is directed southwestward, eventually to Padden Creek.

3.2 PROJECT VICINITY

The subject property is located within the Happy Valley neighborhood, an urban area in the City of Bellingham. High density residential development is located to the west, north and south of the property. The Connelly Creek natural area, containing, Connelly Creek, forest habitat, wetlands and a trail system are located east of the property.

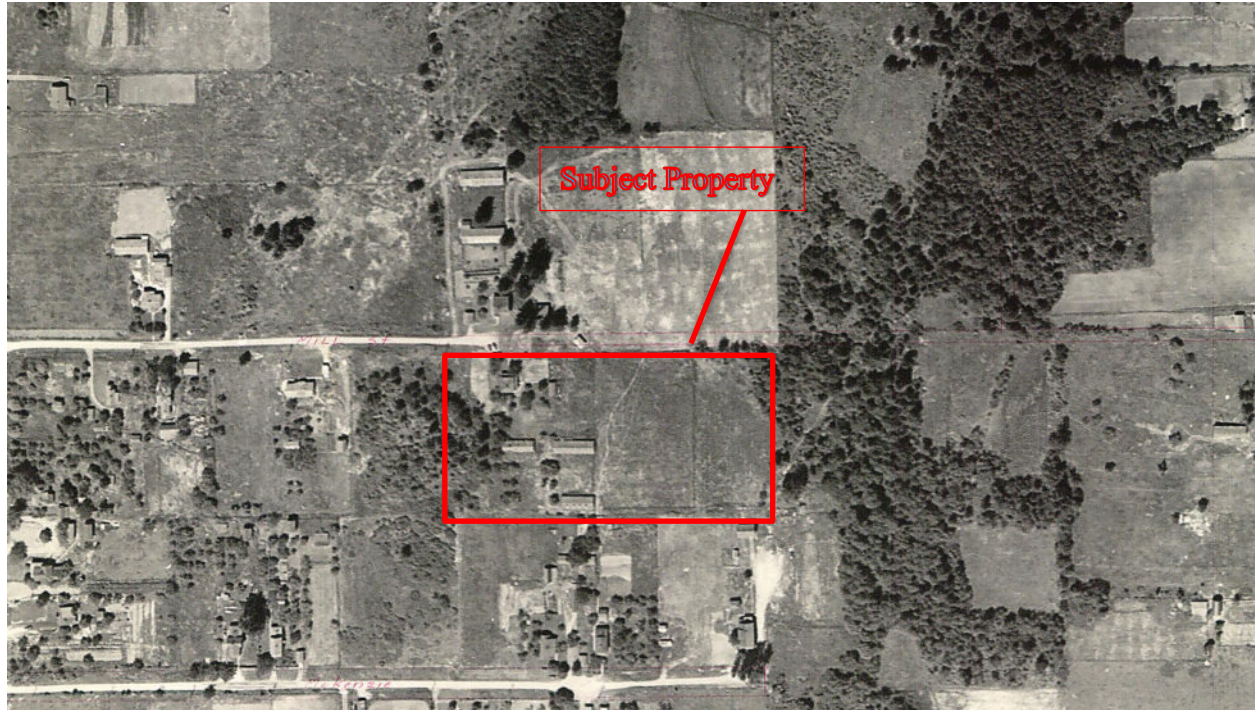
3.3 PROJECT SITE

The review area includes the entire property at 2706 Mill Avenue – consisting of two adjacent properties.

The west side of the property contains an existing single-family residence, shop and landscaping (lawn). Several barns and outbuildings are located in the center of the property. A majority of the eastern portion of the property is field that has been used as pasture in the past. The edge of forested wetland habitat (Wetland A) is located across the northeast corner of the property. The property has generally been a cleared farm property since the 1940's. A 1950 aerial photo is included below as **Figure 2**.

Three wetlands were identified and flagged on the property. A site map is included in **Appendix A**. Site photographs are included in **Appendix B**.

Figure 2: 1950 Aerial Photograph



4.0 RESULTS

4.1 FIELD INVESTIGATION

Three wetlands, Wetlands A, B and C, were identified on the property. These wetlands are summarized below in **Table 2**. MES flagged all onsite wetland boundaries, which were subsequently surveyed by professional land surveyors and mapped in AutoCAD.

Table 1: Project Wetlands Summary

Wetland	Cowardin Classification	Ecology Category	HGM Class	Ecology Habitat Score	City of Bellingham Buffer Width (Feet) ¹
A	PFO/PEM	II	Depressional	Moderate (6)	150
B	PEM	III	Depressional	Moderate (5)	0 ²
C	PEM	III	Depressional	Moderate (5)	0 ²

¹Assumes high intensity land use proposal - more than one unit per acre.

²Wetlands B and C are exempt from buffer requirements, per BMC 16.55.270(B)(1).

Additionally, the City of Bellingham Habitat Restoration Technical Assessment (ESA et. al., 2015) shows the entire property, excluding the residence at the northwest corner, as a lobe of forest habitat block 40. Though, the property does not contain a significant amount of forest habitat or trees and has been a farm field since the 1940's. A wetland restoration assessment action polygon is shown over the approximate area of Wetland A and forest protection assessment polygon is shown over the east end of the property, extending eastward into the Connelly Creek corridor.

The City of Bellingham Wildlife Corridor Analysis (Diamond Head Consulting, 2021) does not show any modeled habitat blocks or corridors on or adjacent to the property.

5.0 REGULATORY REQUIREMENTS

The wetlands identified on the property are subject to federal regulations under the Clean Water Act (CWA) Section 404, as well as state regulations under the Growth Management Act administered by the City of Bellingham under the CAO.

5.1 CWA SECTION 404- ARMY CORPS OF ENGINEERS

Pursuant to Section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of dredged and/or fill material into waters of the United States, including wetlands and streams. The applicant will be applying for nationwide permit coverage for less than 0.5 acre of proposed wetland fill.

5.2 CWA SECTION 401- DEPARTMENT OF ECOLOGY

The Department of Ecology is the state agency responsible for administering the CWA Section 401 Water Quality Certification program. Wetland impacts requiring a Corps permit under Section 404 of the CWA are also subject to the provisions of Section 401. Corps regulations require that a 401 Certification or waiver thereof be issued by the responsible state agency before the 404 permit becomes valid.

5.3 CRITICAL AREAS ORDINANCE- CITY OF BELLINGHAM

The City of Bellingham regulates critical areas, including wetlands and their associated buffers, under Title 16, Chapter 55 of the Municipal Code. Buffer widths are determined based on habitat functions provided by the wetland, wetland category, and the proposed land use intensity. Buffers for onsite wetlands are listed in **Table 1** above.

In addition to the required buffers, a 15-foot building setback from the edge of buffers is also required under BMC 16.55.340(G) for around above ground structures, paving, and other hard surfaces – unless the director determines a shorter distance is appropriate. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer.

Per City of Bellingham Code (16.55.340.C.2) buffers may be reduced with the following conditions:

- a. The buffer of a Category I wetland shall not be reduced;

- b. The buffer reduction shall not adversely affect the functions and values of the adjacent wetlands;
- c. The buffer of a Category II or III wetland shall not be reduced to less than 75 percent of the required buffer or 50 feet, whichever is greater;
- d. The buffer of a Category IV wetland shall not be reduced to less than 50 percent of the required buffer, or 25 feet, whichever is greater, provided the buffer reduction does not result in reducing the functions and values of the wetland; and
- e. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no new loss of buffer functions and values. The specific measures that shall be implemented include, but are not limited to, the following:
 - i. Direct lights away from the wetland and buffer;
 - ii. Locate facilities that generate substantial noise (such as some manufacturing, industrial and recreational facilities) away from the wetland and buffer;
 - iii. Implement integrated pest management programs;
 - iv. Infiltrate or treat, detain and disperse runoff into buffer;
 - v. Construct a wildlife permeable fence around buffer and post signs at the outer edge of the critical area or buffer to clearly indicate the location of the critical area according to the direction of the City;
 - vi. Plant buffer with “impenetrable” native vegetation appropriate for the location;
 - vii. Use low impact development techniques to the greatest extent possible;
 - viii. Establish and record a permanent conservation easement to protect the wetland and the associated buffer and restrict the use of pesticides and herbicides in the easement.

6.0 PROJECT DESCRIPTION AND IMPACT ASSESSMENT

The proposed project includes construction of a 15-unit residential project, with the retention of the existing house on the northwest corner. The project includes the construction of site access, associated infrastructure and stormwater flow control and treatment. Stormwater will be collected and treated in an onsite stormwater vault from onsite impervious services. Treated water will be released at modeled pre-disturbance rates from a dispersion trench located at the base of a slope adjacent to Wetland A. The proposed project includes 15,546 square feet of impact to the Wetland A buffer – from the placement of proposed residential units, roadway and stormwater dispersion pipe and trench.

Site plans showing the existing conditions, proposed project and impacts and mitigation are in **Appendix A**.

6.1 WETLAND IMPACTS

Direct Impacts

The construction of the proposed project will result no direct impacts to onsite wetlands or habitat conservation areas. The proposed project is located in areas of previous farm buildings and grass.

Indirect Impacts

No indirect impacts to wetlands are proposed. It is not anticipated that wetland hydrology will be significantly affected. The proposed buffer impacts will occur to the outer portion of the wetland buffer in areas containing grass and herbaceous species. No trees or root zones are located in the vicinity of the proposed reduced buffer edge.

Stormwater will be collected from the proposed development, treated and released at the pre-disturbance modeled rates to Wetland A. As the proposed development is within a small portion of the contributing basin to Wetland A, and post-disturbance water will be collected, treated and disbursed to Wetland A, no significant changes to Wetland A hydrology are anticipated.

Temporary Impacts

No temporary impacts are proposed or anticipated.

Cumulative Impacts

The proposed project site is within the Connelly Creek Watershed, a basin within the Padden Creek Watershed draining to Bellingham Bay. This portion of the basin is heavily developed with high density residential development, schools and commercial development – with the exception of the Connelly Creek corridor and forested riparian area. A majority of the basin is developed or built out.

Cumulative impacts to remaining wetlands in the basin are not anticipated, as most of the basin is already heavily developed. Any remaining areas with the potential for development in this portion of the watershed will need to meet similar requirements as this proposed project (with critical areas avoidance, minimization, mitigation, silt fencing, and/or other conservation measures, etc.), and as such impacts would be minimized. Additionally, the eastern portion of the property, previously a field adjacent to the Connelly Creek riparian area and forest, will be protected within a conservation easement and a portion will be planted with native trees and shrubs as buffer enhancement.

6.2 BUFFER IMPACTS

Buffer impacts, via buffer reduction, are proposed for Wetland A. Impacts will occur with the placement of residences, a drive lane and a stormwater dispersion trench.

Total proposed buffer impacts are 15,546 square feet.

Per City of Bellingham Code (16.55.340.C.2) buffers may be reduced with the following conditions:

a. The buffer of a Category I wetland shall not be reduced;
Not applicable.

b. The buffer reduction shall not adversely affect the functions and values of the adjacent wetlands;
The proposed buffer reduction is not anticipated to adversely affect the wetland. The impacts will occur to buffer area dominated by grass species. The impact will occur in the outer portion of the buffer, and a large portion of the remaining area of buffer will be enhanced with native tree and shrub plantings – increasing buffer function of the buffer.

c. The buffer of a Category II or III wetland shall not be reduced to less than 75 percent of the required buffer or 50 feet, whichever is greater;
The Wetland A buffer will be reduced by 25 percent over a majority of the development area. One small location will be reduced to 97 feet in the southeast portion of the proposed development, from the corner of a site access road, and a small strip behind the two northern units will be reduced to 104 feet.

d. The buffer of a Category IV wetland shall not be reduced to less than 50 percent of the required buffer, or 25 feet, whichever is greater, provided the buffer reduction does not result in reducing the functions and values of the wetland; and
No Category IV buffers are proposed for reduction.

e. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no new loss of buffer functions and values. The specific measures that shall be implemented include, but are not limited to, the following:

i. Direct lights away from the wetland and buffer;
As feasible, and allowed in City Code, lights will be directed away from onsite wetlands and buffers.

ii. Locate facilities that generate substantial noise (such as some manufacturing, industrial and recreational facilities) away from the wetland and buffer;
No manufacturing or significant noise producing uses are proposed for the site.

iii. Implement integrated pest management programs;
Integrated pest management will be integrated as feasible and practicable.

iv. Infiltrate or treat, detain and disperse runoff into buffer;
Stormwater runoff from proposed development will meet City of Bellingham requirements of treatment, detention and dispersal.

Treated water from the development will be dispersed at the modeled pre-disturbance rate to Wetland A to maintain wetland hydrology.

- v. Construct a wildlife permeable fence around buffer and post signs at the outer edge of the critical area or buffer to clearly indicate the location of the critical area according to the direction of the City;

A split rail, signage and Nootka rose barrier will be constructed at the edge of the proposed buffer adjacent to areas proposed for development.

- vi. Plant buffer with “impenetrable” native vegetation appropriate for the location;

The Wetland A buffer will be enhancement with native vegetation.

- vii. Use low impact development techniques to the greatest extent possible;

Low impact development techniques will be implemented to the extent possible.

- viii. Establish and record a permanent conservation easement to protect the wetland and the associated buffer and restrict the use of pesticides and herbicides in the easement.

A permanent conservation easement will be established for the wetlands and proposed buffers onsite.

6.3 FISH AND WILDLIFE HABITAT CONSERVATION AREA IMPACTS

The project site does not contain Fish and Wildlife Habitat Conservation Areas. The eastern portion of the site has been identified as a component of Forest Block 40 with a recommended forest protection and wetland protection overlay. However, this area will not be disturbed with the construction of the project.

7.0 MITIGATION

In order to accommodate a reasonable residential development on the property, 15,546 square feet of buffer impacts are proposed in the outer portion of the Wetland A buffer.

Mitigation for wetland buffer impacts will include the enhancement of 23,607 square feet of wetland buffer between the proposed development and Wetland A – a 1.5 to one enhancement ratio (enhancement to impact). The Wetland A buffer on the property is currently dominated by grass species. The proposed buffer enhancement will include installation of trees and shrubs to increase the habitat value and screening of the buffer. Any invasive species within the buffer will also be removed. The location of the proposed mitigation is shown on a map in **Appendix A**.

7.1 MITIGATION SEQUENCING (BMC 16.55.250)

1. **Avoid the impact.** The subject property contains three wetlands on the eastern side of the property. No wetland impacts are proposed. A small amount of buffer impacts is

necessitated to construct the units, access road and stormwater dispersion trench – to an area of buffer dominated by grass species.

2. **Minimize the impact.** Impacts have been minimized as feasible to construct the proposed residential development.
3. **Rectify the impact.** No temporary impacts are expected.
4. **Minimize or eliminate the hazard.** No hazards are located on the property.
5. **Reduce or eliminate the impact or hazard.** No hazards are located on the property.
6. **Compensate for impacts.** Compensation for wetland buffer impacts will include onsite buffer enhancement at a 1.5 to one ratio.
7. **Monitor the hazard or other required mitigation.** The proposed mitigation will be monitored for five years, per this mitigation plan.

7.2 MITIGATION GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

This mitigation plan has been designed to replace lost buffer function due to proposed project-related impacts. During monitoring activities, performance standards will be measured to ensure the site is meeting the Goals and Objectives of the mitigation project. These standards are the primary factors that will be used to judge the success of the mitigation project. While specific performance criteria provide important benchmarks and will help to direct maintenance and contingency efforts, the mitigation goals must also be considered when evaluating mitigation success.

The applicant will be responsible for the construction of the proposed mitigation and for ensuring the monitoring and maintenance occurs annually for ten years. The applicant may hire a qualified professional to conduct annual monitoring and maintenance.

Goal A: Improve buffer function and wildlife habitat in onsite portion of the Wetland A buffer.

Objective A.1: Enhance 23,607 square feet of Wetland A buffer by removing invasive species and planting native trees and shrubs.

Performance Standard A.1.1: 90-percent survival of installed plants at Year 1.

Performance Standard A.1.2: There will be at least 10, 15, 30 and 50 percent aerial cover of native shrub and tree species (excluding cover by invasive species) in the enhancement area by the end of Years 2, 3, 4 and 5 respectively. This can include native plant recruits.

Performance Standard A.1.3: Aerial cover of noxious weed species within the mitigation planting area shall not exceed 15-percent in the first year and shall be less than 20 percent in years 2, 3, 4, and 5. Noxious weeds are listed by the Whatcom County Noxious Weed Control Board. Commonly found noxious weeds in this area that could threatened the success of the mitigation area are listed in **Table 2**.

Table 2: Non-native, Invasive Species that Must Be Removed

Scientific Name	Common Name
<i>Phalaris arundinacea</i>	Reed canarygrass
<i>Hedera helix</i>	English Ivy
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Rubus laciniatus</i>	Cutleaf blackberry
<i>Rubus armeniacus</i>	Himalayan blackberry

Performance Standard A.1.4: At least three species of trees and five species of shrubs shall be represented in the enhancement area.

7.2.1 Buffer Enhancement Methods

Approximately 23,607 square feet of the Wetland A buffer will be enhanced. Prior to installing native plants, invasive species will be removed from the buffer area where present. The entire buffer enhancement area shall be sheet mulched to a depth of four to six inches depth. Any existing native trees or shrubs should be preserved.

At least three different tree species and five different shrub species shall be chosen from **Table 3** for the buffer enhancement area. All plant materials used at the mitigation site shall be grown in the Puget Sound lowlands. Each plant shall be flagged with bright colored flagging to assist with annual monitoring.

Table 3: Planting List for Wetland A Buffer Enhancement Area

Botanical Name	Common Name	Size/Condition¹	Spacing
<i>Pseudotsuga menziesii</i>	Douglas fir	1-2 Gal or bareroot	10 feet
<i>Picea sitchensis</i>	Sitka spruce	1-2 Gal or bareroot	10feet
<i>Prunus emarginata</i>	Bitter cherry	1-2 Gal or bareroot	10 feet
<i>Pinus contorta</i>	Shore pine	1-2 Gal or bareroot	10 feet
<i>Abies grandis</i>	Grand fir	1-2 Gal or bareroot	10 feet
<i>Thuja plicata</i>	Western red-cedar	1-2 Gal or bareroot	10 feet
<i>Acer macrophyllum</i>	Big-leaf maple	1-2 Gal or bareroot	10 feet
Total Trees = 236 (choose 3 or more species)			
<i>Symphoricarpos albus</i>	Snowberry	1-2 Gal or bareroot	5 feet
<i>Crataegus douglasii</i>	Black hawthorne	1-2 Gal or bareroot	5 feet
<i>Corylus cornuta</i>	Hazelnut	1-2 Gal or bareroot	5 feet
<i>Amelancier alnifolia</i>	Serviceberry	1-2 Gal or bareroot	5 feet
<i>Rosa nutkana</i>	Nootka rose	1-2 Gal or bareroot	5 feet
<i>Holodiscus discolor</i>	Oceanspray	1-2 Gal or bareroot	5 feet
<i>Oemleria cerasiformis</i>	Indian plum	1-2 Gal or bareroot	5 feet
<i>Ribes sanguineum</i>	Red-flowering currant	1-2 Gal or bareroot	5 feet
<i>Sambucus racemose</i>	Red elderberry	1-2 Gal or bareroot	5 feet
<i>Rubus parviflorus</i>	Thimbleberry	1-2 Gal or bareroot	5 feet
<i>Rhamnus prushiana</i>	Cascara	1-2 Gal or bareroot	5 feet
<i>Rubus spectabilis</i>	Salmonberry	1-2 Gal or bareroot	5 feet
Total Shrubs = 738 (choose 5 or more species)			
Nootka Rose Barrier			
<i>Rosa nutkana</i>	Nootka rose	1-2 Gal or bareroot	3 feet
Total Rose (planted in two offset rows) = 280			

¹Bare root plantings should be planted December to March – the dormant period.

7.2.2 Mitigation Implementation Schedule

The proposed mitigation requires plant installation concurrent with project development or during the following planting season if necessary for planting success during the rainy season. Mitigation plantings should be installed in the fall, winter (if bare root) or early spring. The installation will include:

1. Pre-construction meeting with the City, wetland biologist and mitigation installation contractor;
2. Silt fencing/erosion controls installed;
3. Removal of any invasive non-native species from the buffer enhancement area (if present);
4. Placement of mulch over all mitigation area;

5. Installation of plants with flagging within the mitigation areas;
6. Removal of erosion controls, silt fencing, as applicable; and
7. Installation of split rail-fencing, Nootka rose barrier and critical areas signage along the final proposed buffer.

Once installed an as-built letter/documentation should be submitted to the City for review and approval. Maintenance of the mitigation areas will occur on an annual basis for the five-year monitoring program. Monitoring reports will be submitted to the City for review and approval over the monitoring period – Years 1 through 5.

7.2.3 Reporting

An as-built letter documenting the mitigation area shall be submitted to the City of Bellingham after installation. Any changes to the approved installation should be noted and described. The as-built letter shall include a brief description of mitigation activities that occurred (invasive removal, plant and mulch installation, fencing, signage, etc.); the date of completion; copies of plant receipts; and photographs of the mitigation area.

Monitoring reports shall be submitted annually for five years beginning the growing season after the mitigation plants are installed. Monitoring reports will then be due in Years 1, 2, 3, 4 and 5. Reports shall be due by December 31 of the monitoring year. The reports will document the condition of the mitigation area and the status of the area with respect to the approved performance criteria. The reports shall include site photographs of the plants.

If a performance standard is not met for all or any portion of the mitigation project the applicant will seek to remedy the situation, i.e., replace plantings and/or conduct maintenance, to bring the site into compliance with performance standards.

Annual reports shall be submitted to:

Critical Areas Mitigation Reviewer – Amy Dearborn
City of Bellingham Planning and Community Development
210 Lottie Street
Bellingham, Washington 98225

7.2.4 Monitoring Methods

Monitoring shall be accomplished by sampling (plots or transect) the mitigation planting areas in the monitoring year.

Photographs of the mitigation should be included to document representative areas of the mitigation site.

7.2.5 Maintenance Activities

The purpose of this maintenance program is to ensure the success of the mitigation plantings. Maintenance will occur over the life of the required monitoring. Non-native/invasive plant species that must be removed are outlined in the performance standards.

Plant removal occurring after installation will be completed by hand (hand power tools or other). All invasive plant material removed must be properly disposed of off-site.

These maintenance guidelines are specifically tailored for native plant establishment. The maintenance personnel will be fully informed regarding the habitat establishment program so they understand the goals of the effort and the maintenance requirements. A landscape contractor with experience and knowledge in native plant habitat restoration is recommended to perform all mitigation maintenance.

7.2.6 Contingency Plan

If a performance standard is not met for all or any portion of the mitigation project in any year, or if the approved success criteria are not met, the wetland biologist will prepare an analysis of the cause(s) of failure and, if determined necessary by the City of Bellingham, Corps or Ecology propose remedial actions for approval. If the compensatory mitigation site has not met one or more of the success criteria or performance standards, the applicants' maintenance and monitoring obligations shall continue until the agencies give final approval the mitigation obligations have been satisfied.

The contingency plan will provide for the remediation of aspects of the mitigation that have prevented the achievement of mitigation goals. If the desired mitigation goals, as measured by the monitoring program and compared against the performance standards, have not been met and cannot be achieved through routine maintenance, then the agencies and the applicant will make a joint determination on a suitable contingency plan. If the contingency plan is substantial, the agencies could extend the monitoring period. The City of Bellingham, Corps and Ecology will approve contingency measures prior to implementing changes to the plan.

7.2.7 Hazard Tree Contingency

The proposed project, residences and infrastructure, will be located in part adjacent to existing forest habitat. Potential future hazard trees may require removal. If a potential hazard tree presents a potential problem for the proposed development, future owners or homeowners association will follow City of Bellingham Code Section 16.55.080.C.6. This applies to the removal and/or pruning of hazard trees within critical areas or their buffers. Per the code section, any potential hazard tree will be reviewed by an ISA (International Society of Arboriculture)-certified arborist. The arborist will prepare a report including a risk assessment, a site plan showing the location of the trees, and a replacement plan. This report will be reviewed the City Director. The applicant shall replace any cut tree with three native

replacement trees (3 to 1 replacement ratio), unless determined otherwise by the Director, within six months of cutting. The applicant shall provide documentation to the City demonstrating that the replacement plantings were installed within six months of the tree removal. Cut trees and other vegetation may be left within the critical area or buffer where it does not pose a public threat or nuisance or damage significantly the surrounding vegetation.

7.2.8 Site Protection

In order to increase protection and screening of the onsite wetlands and buffers from disturbance, split rail fencing or guardrail (above a retaining wall) will be installed along the east perimeter of the development boundary. Critical Areas Protection signs shall be installed along the fencing – spaced approximately 100 feet apart. Additionally, a Nootka rose barrier shall be installed behind the split rail fence. This will include two offset rows of Nootka rose at 3-foot on center spacing. Additionally, the onsite wetlands and final proposed buffer area will be placed within a permanent conservation easement.

7.2.9 Mitigation Surety

A mitigation bond or assignment of savings will be submitted to the City of Bellingham Planning and Community Development in the amount of 150 percent of the estimated cost of mitigation installation, maintenance, and monitoring. The bond is required for the City of Bellingham and so is based on the City required 5 years of monitoring. Monitoring for the Corps will continue to Year 10. The estimated costs include are outlined below.

- Mulch: 291 cubic yards at \$25 cy - \$7,275
- plants cost and install: 1,224 plants at \$8.50 each - \$10,404
- Split rail fence: 360 linear feet at \$12.00 per linear foot - \$4,320
- Signs: 5 signs at \$50 each - \$250
- Maintenance costs: \$360/year x 5 years - \$1,800
- Monitoring: \$720/year x 5 monitoring events - \$3,600

The total estimated cost is \$27,649. The total surety amount (cost x 150-percent) is **\$41,474**.

8.0 REFERENCES

- Diamond Head Consulting. 2021. *2021 Wildlife Corridor Analysis Methods Summary & Results*. City of Bellingham Public Works Dept. July 13, 2021. Bellingham, WA
- Diamond Head Consulting. 2022. *City of Bellingham State of the Urban Forest*. City of Bellingham. May 2022. Bellingham, WA
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- ESA, Veda Environmental, and NW Ecological Services. 2015. *Final – Bellingham Habitat Restoration Technical Assessment*. November 2015 Bellingham, WA.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington. Washington State Department of Ecology Publication # 14-16-029.
- Miller Environmental Services, 2022. *Critical Areas Report: Wetlands and Habitat Conservation Areas for 2706 Mill Avenue Property*. June 21, 2023. Bellingham, Washington.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. Corps of Engineers Research and Development Center Environmental Laboratory. ERDC/EL TR-10-3. Vicksburg, Mississippi.
- Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. March 2006. *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1)*. Washington State Department of Ecology Publication #06-06-011a. Olympia, Washington.

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APPENDICES

Appendix A
Project Site Maps

WETLANDS AND BUFFERS DELINEATED BY MILLER ENVIRONMENTAL SERVICES, L.L.C. IN NOVEMBER OF 2022 AND LOCATED BY THIS FIRM IN NOVEMBER OF 2022.

SURVEYORS NOTES:

1. "O" DENOTES 5/8 INCH REBAR WITH 1 INCH PLASTIC CAP MARKED "MS & GPS 4276 & 50982" SET BY THIS SURVEY.
2. "●" DENOTES REBAR AND CAP MARKED "ROCKY LS.11893" FOUND BY THIS SURVEY.
3. "89" DENOTES REBAR AND CAP MARKED "STEEL LS.13139" FOUND BY THIS SURVEY.
4. "80" DENOTES REBAR AND LEGIBLE CAP FOUND BY THIS SURVEY.
5. "H" DENOTES HUB AND LATH SET FOR POINTS ON LINE BY THIS SURVEY.
6. "*" DENOTES CALCULATED POSITION ONLY.
7. THIS SURVEY WAS PERFORMED BY STANBARD FIELD TRAVERSE USING A GEOMAX Z6000 TOTAL STATION WITH A CARLSON SURVEYOR 2 COLLECTOR/FIELD COMPUTER IN OCTOBER OF 2022. ACCURACY EXCEEDS 1:10,000.
8. THIS SURVEY TIED INTO STREET MONUMENTATION, CENTER-SOUTH 1/16TH CORNER, SOUTH 1/16TH CORNER AND LOT CORNERS AS SHOWN AND REFERRED UPON FOUND MONUMENTATION FOR THE NORTH LINE OF THE SOUTH HALF OF THE SOUTHWEST QUARTER MILL AVE. FOR BASIS OF BEARINGS.
9. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND DOES NOT PURPORT TO SHOW ANY OR ALL EASEMENTS THAT A CURRENT TITLE REPORT MIGHT REVEAL.
10. VERTICAL DATUM = NAVD 88
11. CONTOUR INTERVALS ARE 1 FOOT. CONTOURS ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAHY OBTAINED FOR THIS SURVEY.
12. NORTHWEST SURVEYING & GPS INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR CONTAMINATION. THE LOCATION OF EXISTING UTILITIES SHOWN ARE BASED UPON FIELD SURVEY AND VISUAL IDENTIFICATION. ALL EXISTING UTILITIES MAY NOT BE INDICATED WITHIN THE CONSTRUCTION DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ANY AND ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND TO ALERT THE ENGINEER AND OWNER PROMPTLY IN CASE OF CONFLICT.

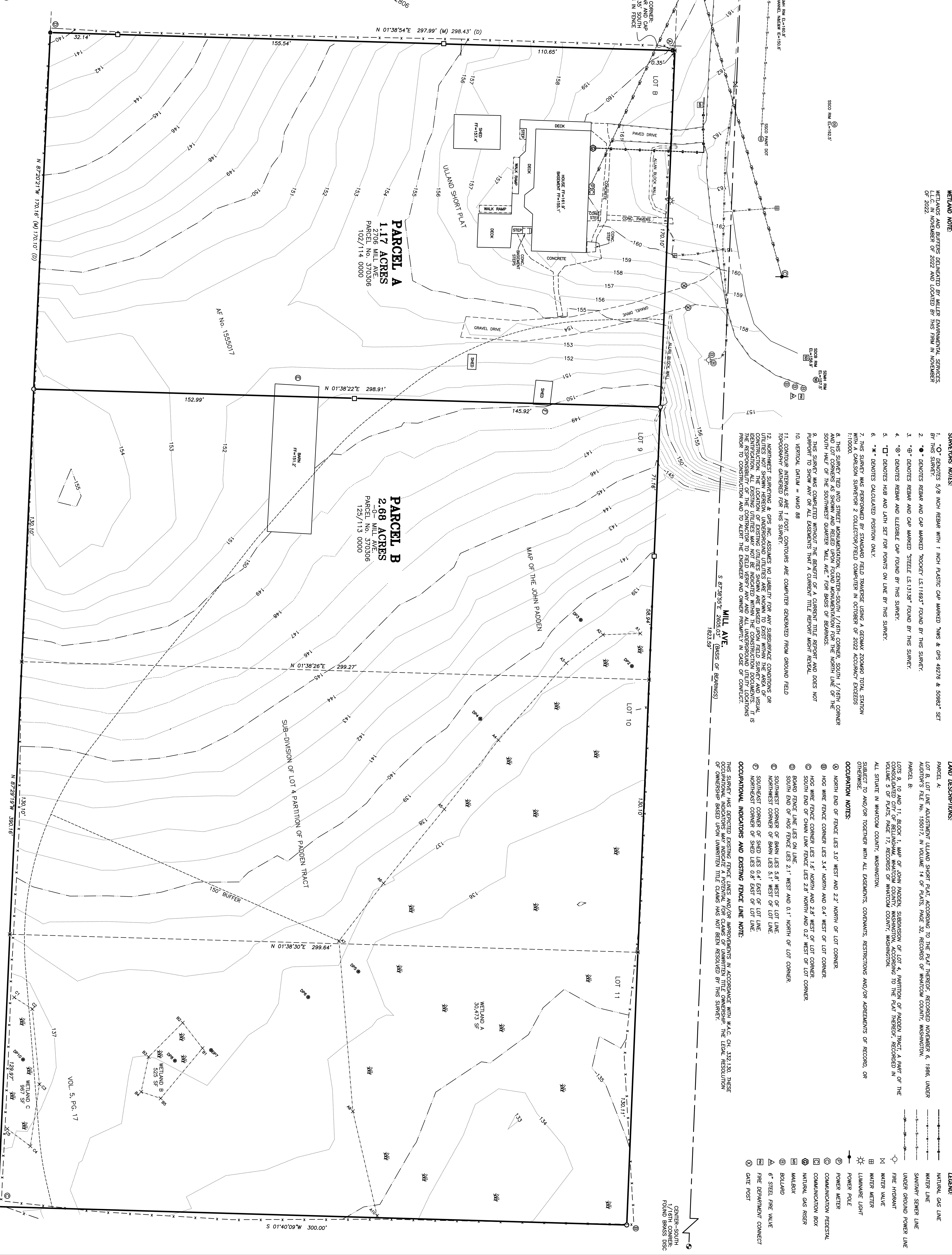
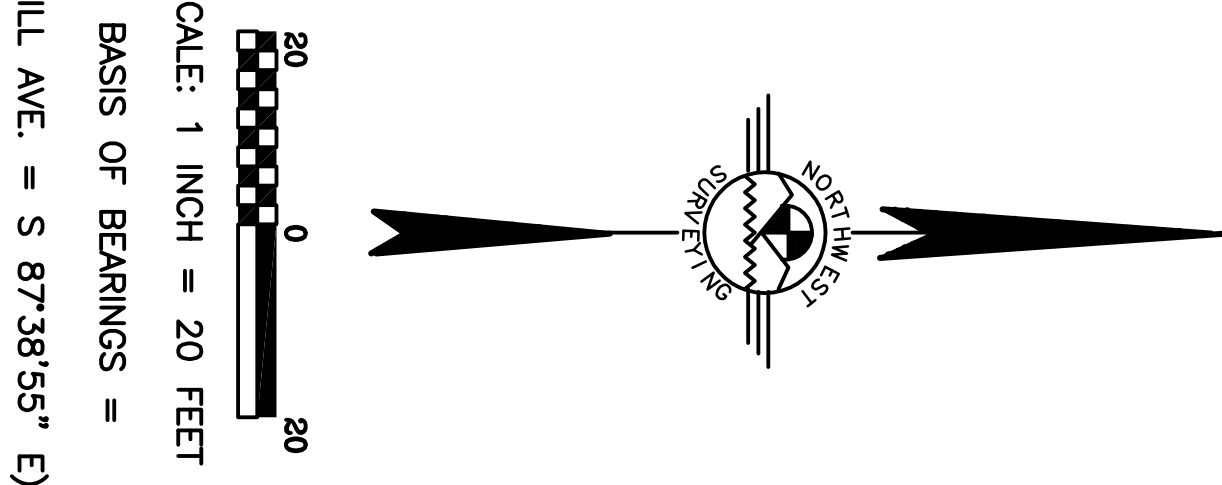
MILL AVE.
S 87°38'56"E, 2692.03' (BASIS OF BEARINGS)
1623.59'

LAND DESCRIPTIONS:

- PARCEL A
LOT B LOT LINE ADJUSTMENT ULLAND SHORT PLAT ACCORDING TO THE PLAT THEREOF, RECORDED NUMBER 6, 1986, UNDER AUDITOR'S FILE NO. 159017, IN VOLUME 14 OF PLATS, PAGE 32, RECORDS OF WHATCOM COUNTY, WASHINGTON.
- PARCEL B
LOTS 9, 10 AND 11, BLOCK 1, MAP OF JOHN PADDEN, SUBDIVISION OF LOT 4, PARTITION OF PADDEN TRACT, A PART OF THE VOLUME 5 OF PLATS, PAGE 17, RECORDS OF WHATCOM COUNTY, WASHINGTON.
- ALL SITUATE IN WHATCOM COUNTY, WASHINGTON.
- SUBJECT TO AND/OR TOGETHER WITH ALL EASEMENTS, COVENANTS, RESTRICTIONS AND/OR AGREEMENTS OF RECORD, OR OTHERWISE.
- OCCUPATION NOTES:**
1. NORTH END OF FENCE LIES 3.0' WEST AND 2.2' NORTH OF LOT CORNER.
 2. HOG WIRE FENCE CORNER LIES 3.4' NORTH AND 0.4' WEST OF LOT CORNER.
 3. SOUTH END OF CHAIN LINK FENCE LIES 2.8' NORTH AND 0.2' WEST OF LOT CORNER.
 4. SOUTH END OF HOG FENCE LIES 2.1' WEST AND 0.1' NORTH OF LOT CORNER.
 5. SOUTHWEST CORNER OF BARN LIES 5.8' WEST OF LOT LINE.
 6. NORTHWEST CORNER OF BARN LIES 5.1' WEST OF LOT LINE.
 7. SOUTHWEST CORNER OF SHED LIES 0.4' EAST OF LOT LINE.
 8. NORTHEAST CORNER OF SHED LIES 0.8' EAST OF LOT LINE.
- OCCUPATIONAL INDICATORS AND EXISTING FENCE LINE NOTE:**
- THIS SURVEY HAS DEPICTED EXISTING FENCE LINES AND/OR IMPROVEMENTS IN ACCORDANCE WITH W.A.C. CH. 332.130. THESE OCCUPATIONAL INDICATORS MAY INDICATE A PROBABLE FORM OF OWNERSHIP OR PARTIAL INTEREST. THE LEGAL RESOLUTION OF OWNERSHIP, BASED UPON UNWRITTEN TITLE CLAIMS HAS NOT BEEN RESULTED BY THIS SURVEY.

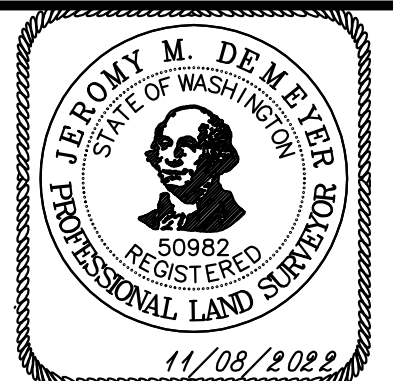
LEGEND:

---	NATURAL GAS LINE
---	WATER LINE
---	SEWERY SEWER LINE
---	UNDERGROUND POWER LINE
○	FINE HYDRAUL
×	WATER VALVE
☀	WATER METER
⊙	LUMINAIRE LIGHT
—	POWER POLE
⊕	POWER METER
⊕	COMMUNICATION FEDERAL
⊕	COMMUNICATION BOX
⊕	NATURAL GAS RISER
⊕	MAILBOX
⊕	ROLLAND
⊕	6" STEEL FINE VALVE
⊕	FIRE DEPARTMENT CONNECT
⊕	CATE POST

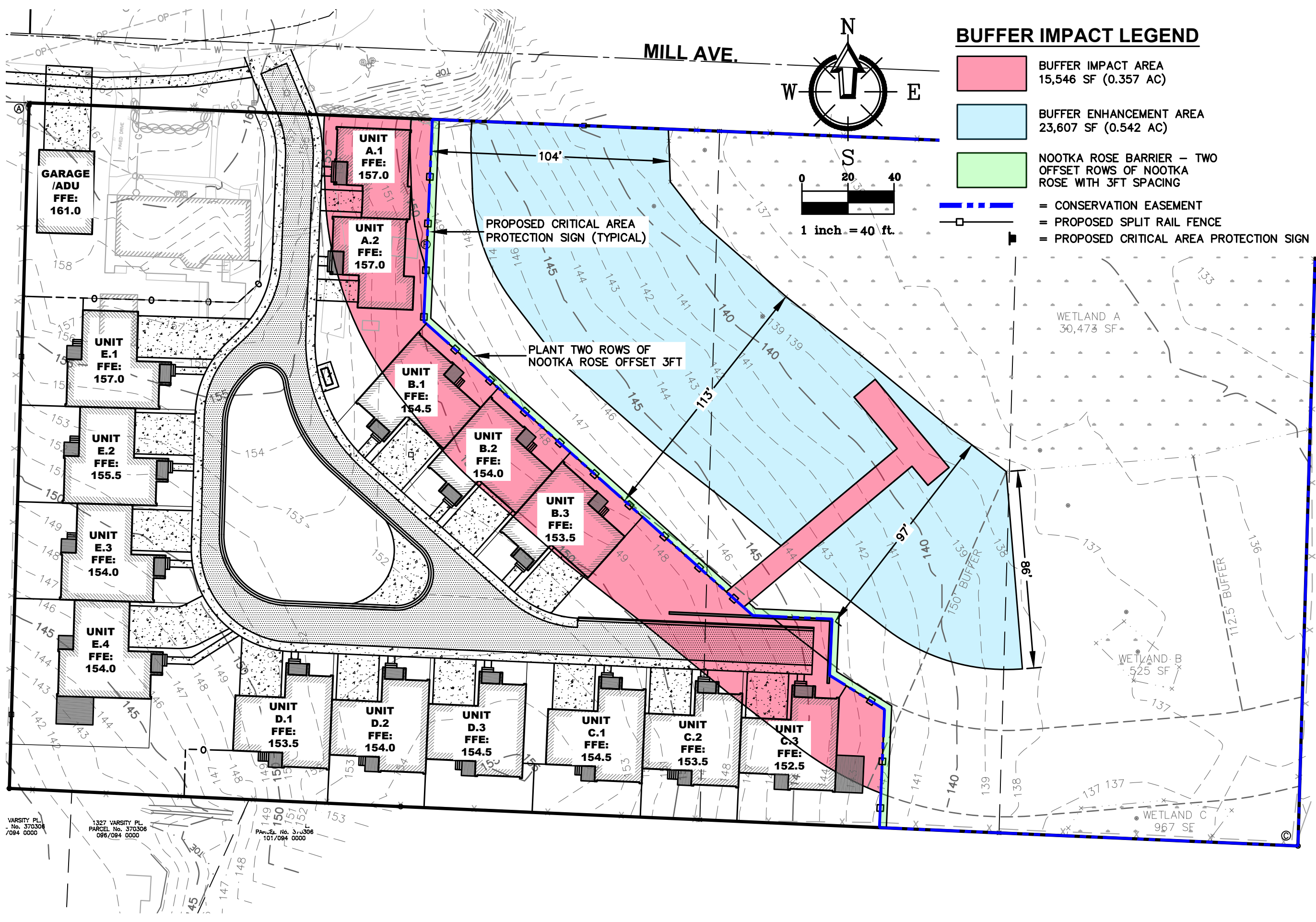


NORTHWEST SURVEYING & GPS, INC.
407 5TH STREET, LYNDEN, WA 98264
PH. (360) 354-1950 NWSURVEY.COM

**TOPOGRAPHY MAP
FOR CHILI PEPPERS L.L.C.**
PORTION OF THE (SW4 SW4, SE4 SW4), SECTION 6,
TOWNSHIP 37 NORTH, RANGE 3 EAST OF W.M.
WHATCOM COUNTY, WASHINGTON

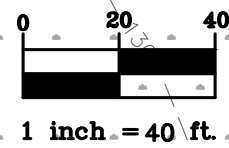
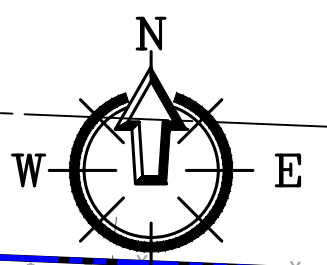


DATE:	11/08/2022
JOB NO:	22-390
DIR:	37-03\063703
CRD:	063703
DRAWN BY:	CHRIS
REVIEWED BY:	JEREMY



VARSITY PL. No. 370306
 7094 0000
 1327 VARSITY PL. PARCEL No. 370306
 096/094 0000
 Parcel 16, 3, U306
 101/094 0000

MILL AVE.

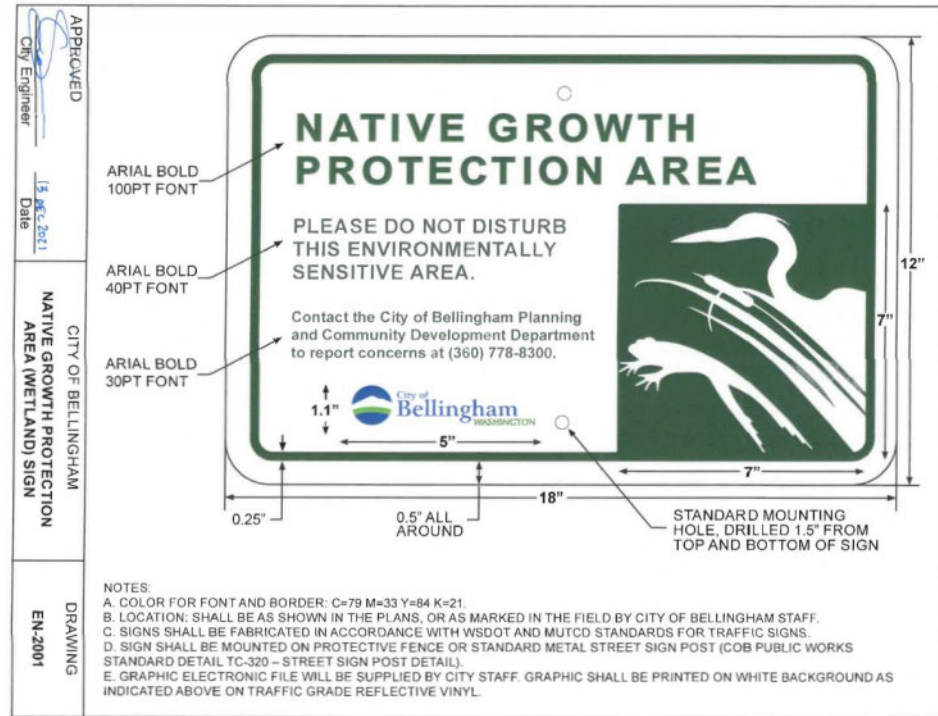


BUFFER IMPACT LEGEND

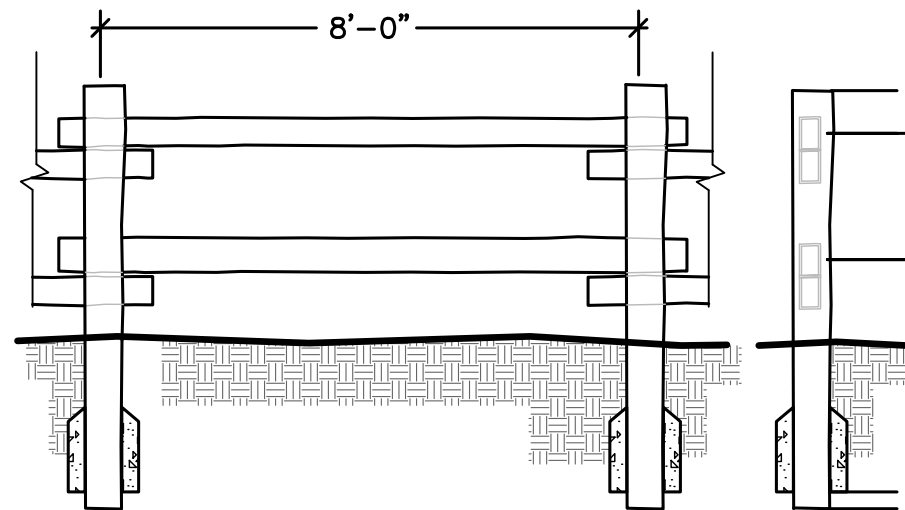
- BUFFER IMPACT AREA
15,546 SF (0.357 AC)
- BUFFER ENHANCEMENT AREA
23,607 SF (0.542 AC)
- NOOTKA ROSE BARRIER – TWO
OFFSET ROWS OF NOOTKA
ROSE WITH 3FT SPACING
- = CONSERVATION EASEMENT
- = PROPOSED SPLIT RAIL FENCE
- = PROPOSED CRITICAL AREA PROTECTION SIGN

DATE	SEPT 2024	JOB #	22275	SHEET NAME	C1
DRAWING #	22275SP15.DWG	SHEET CONTENTS			
MILL AVENUE WETLANDS EXHIBIT					
F R E E L A N D & A S S O C I A T E S					
220 W. Champion Street, Suite 200 Bellingham, WA 98225 t: 360.650.1408 f: 360.650.1401					





A NGPA (WETLAND) SIGN
nts



B SPLIT RAIL FENCE
nts

Planting List for Wetland A Buffer Enhancement Area

Botanical Name	Common Name	Size/Condition ¹	Spacing
<i>Pseudotsuga menziesii</i>	Douglas fir	1-2 Gal or bareroot	10 feet
<i>Picea sitchensis</i>	Sitka spruce	1-2 Gal or bareroot	10 feet
<i>Prunus emarginata</i>	Bitter cherry	1-2 Gal or bareroot	10 feet
<i>Pinus contorta</i>	Shore pine	1-2 Gal or bareroot	10 feet
<i>Abies grandis</i>	Grand fir	1-2 Gal or bareroot	10 feet
<i>Thuja plicata</i>	Western red-cedar	1-2 Gal or bareroot	10 feet
<i>Acer macrophyllum</i>	Big-leaf maple	1-2 Gal or bareroot	10 feet
Total Trees = 236 (choose 3 or more species)			
<i>Symphoricarpos albus</i>	Snowberry	1-2 Gal or bareroot	5 feet
<i>Crataegus douglasii</i>	Black hawthorne	1-2 Gal or bareroot	5 feet
<i>Corylus cornuta</i>	Hazelnut	1-2 Gal or bareroot	5 feet
<i>Amelancier alnifolia</i>	Serviceberry	1-2 Gal or bareroot	5 feet
<i>Rosa nutkana</i>	Nootka rose	1-2 Gal or bareroot	5 feet
<i>Holodiscus discolor</i>	Oceanspray	1-2 Gal or bareroot	5 feet
<i>Oemleria cerasiformis</i>	Indian plum	1-2 Gal or bareroot	5 feet
<i>Ribes sanguineum</i>	Red-flowering currant	1-2 Gal or bareroot	5 feet
<i>Sambucus racemose</i>	Red elderberry	1-2 Gal or bareroot	5 feet
<i>Rubus parviflorus</i>	Thimbleberry	1-2 Gal or bareroot	5 feet
<i>Rhamnus prushiana</i>	Cascara	1-2 Gal or bareroot	5 feet
<i>Rubus spectabilis</i>	Salmonberry	1-2 Gal or bareroot	5 feet
Total Shrubs = 738 (choose 5 or more species)			
Nootka Rose Barrier			
<i>Rosa nutkana</i>	Nootka rose	1-2 Gal or bareroot	3 feet
Total Rose (planted in two offset rows) = 280			

¹Bare root plantings should be planted December to March - the dormant period.

PLANTING NOTES

Planting Notes and Implementation Schedule.

- Schedule a pre-construction meeting with the City prior to the initiation of work;
- Install silt fencing/erosion controls;
- Remove any invasive non-native species from the buffer enhancement area (if present), mowing of buffer area as needed;
- Install at least four inches of hogfuel or wood chip mulch over the buffer enhancement area (if sheet mulched) or in 3-foot radius rings around plantings. Mulch to be placed in 3-foot radius rings around planting in the wetland enhancement area.;
- Install shrubs at 5 foot on center spacing and trees at 10 foot on enter spacing. Choose 3 or more shrub species from the planting tables. Install plants with flagging for identification purposes;
- Remove erosion controls, silt fencing, as applicable; and
- Install split rail-fencing and critical areas signage between the proposed development and wetland buffer per approved site plan.

C PLANTING SCHEDULE & NOTES
nts

SHEET CONTENTS

MILL AVENUE WETLANDS EXHIBIT

220 W. Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

FREELAND
& ASSOCIATES



DATE
SEPT 2024

JOB #
22275

SHEET NAME
C1

DRAWING #
22275SP15.DWG

Appendix B
Site Photographs

Site Photographs



Photo 1. View southeast over the house and northwest corner of property from Mill Ave (11/1/22).



Photo 2. View east from just south of the house over the center of the property (11/1/22).

Site Photographs



Photo 3. View south from just south of the house over the east side of the property (11/1/22).



Photo 4. View west from near the south property boundary over the southwest corner of the property (11/1/22).

Site Photographs



Photo 5. View north from the south property boundary over the house (11/1/22).



Photo 6. View east from just east of the house along the north property boundary (11/1/22).

Site Photographs



Photo 7. View north into the offsite emergent area of Wetland A from near the north property boundary (11/1/22).



Photo 8. View east into forest habitat in Wetland A on the north property boundary (11/1/22).

Site Photographs



Photo 9. View west from the Wetland A boundary toward the house, along the north property boundary (11/1/22).



Photo 10. View east across the emergent portion of Wetland A on-site toward the east property boundary (11/1/22).

Site Photographs



Photo 11. View northwest along Taylor Creek, within Wetland A, just offsite to the east (11/1/22).



Photo 12. View east over Wetland B from near the west side of the wetland (11/1/22).

Site Photographs



Photo 13. View southwest over Wetland C from near the northeast corner of the wetland (11/1/22).



Photo 14. View west along the south property boundary from just north of Wetland C (11/1/22).

