Attachment B

Planning and Community Development Department
210 Lottie Street, Bellingham, WA 98225
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CONSOLIDATED PERMIT AND DECISION FOR DESIGN REVIEW AND CRITICAL AREAS

SUB2024-0007/DR2024-0001/CAP2024-0010/ ADU2024-0018, -0019 and -0020
Type I and II

I. SUMMARY OF DECISION

Proposal (Exhibit A):

This consolidated permit includes design review, accessory dwelling units and critical areas decisions through the Type I and II application review processes for an 8-lot cluster short subdivision. The required cluster preliminary plat is not part of this permit decision and is under concurrent review through the Type III application process with a final decision issued by the hearing examiner.

Design review, including the requested infill housing modifications, is approved for 7 infill housing units, consisting of 4 townhouses and 3 small lots, with each small lot containing an attached accessory dwelling unit (ADU). The existing residence will be retained and placed on a separate lot.

Vehicular access for all units is provided from a single driveway off Deemer Road. Each lot will be served with public and private infrastructure compliant with code.

The proposed wetland buffer impacts are approved with appropriate mitigation occurring on site.

Applicant: Ali Taysi, AVT Consulting, LLC, 1708 F Street, Bellingham WA 98225; 360-527-9445.

Owner: Ben Diamond and Priscillia Hunt, 5421 Selmaraine Drive, Culver City CA 90230

Decision: Approval with conditions.

Date: August 16, 2024

II. PROPERTY LOCATION AND DESCRIPTION

Address: 4056 Deemer Road

Legal Description: Lengthy legal description; included in **Exhibit A**.

Whatcom County Assessor ID#: 380318 195488 0000

III. PERMIT PLANS AND ATTACHMENTS

This approval includes the following documents, subject to any modifications and conditions contained in **Section V** of this permit:

Exhibit A – January 24, 2024 application materials including site, building design, and landscape plans.

Exhibit B – Public comment

Exhibit C – *Critical Areas Assessment*, Prepared by NW Ecological Services, February 2022

Exhibit D – *Impact Assessment & Mitigation Plan*, prepared by NW Ecological Services, January 2024

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The site consists of a 1-acre parcel located on Deemer Road. The site is developed with a single-family residence and contains a wetland and its associated buffer.

2. The property is located in Area 20 of the Meridian Neighborhood and zoned Residential Single, Planned with a 10,000 square foot density and up to a 6,200 square-foot density with a density-bonus. The proposed number of units, 8, is consistent with the density provisions provided the density bonus is approved by the hearing examiner through the preliminary plat process.

3. The proposal includes retention of the existing single-family residence and the development of 7 infill housing units consisting of four townhouses and 3 small lot infill housing units. Each small lot is proposed to have an attached accessory dwelling unit.

   In accordance with Chapter 20.28 BMC and BMC 20.30.030, infill housing in single-family zoning subareas with a “cluster,” “cluster detached,” “cluster attached,” and “planned” use qualifier shall be divided through the cluster subdivision process. The site has a Planned use qualifier and therefore, requires approval of the associated cluster preliminary plat application (SUB2024-0007) known as the Diamond Deemer Preliminary Plat. The hearing examiner issues the final decision regarding the cluster preliminary plat. This permit decision can only be approved if appropriately conditioned that the associated cluster preliminary plat application is approved and this permit decision is subject to the terms and conditions of the hearing examiner’s decision concerning preliminary plat. This permit decision shall be deemed null and void if the preliminary plat is not approved or conditionally approved in a manner determined inconsistent with this permit. The applicant may re-apply for a new infill/design review permit consistent with the cluster preliminary plat decision.

4. The abutting properties to the north, south and east are in the same subarea as the subject site and developed with single-family residences and a fire station, Bellingham Fire District Station #6. Properties to the west across Deemer Road are in Area 19 of the Meridian Neighborhood, zoned Residential-Multi, and developed with multifamily uses.

5. June 2023: Land use applications for the subject site were submitted for a similar project that included the same number of units in townhouse configurations and retention of the existing residence. The proposed designs for the townhouse units were determined unfeasible and the applications were withdrawn.

6. January 24, 2024: The City received land use applications for cluster preliminary plat, design review, critical areas and accessory dwelling units.
7. February 21, 2024: The City determined the applications sufficient to begin review and deemed the applications complete.
8. March 7, 2024: The city issued a Notice of Application establishing a comment period through March 21, 2024 compliant with BMC 21.10.200. In response to this notice, the city received one public comment concerning parking and the loss of vegetation, primarily trees on the northern property line. **Exhibit B**

   Staff evaluated the public comment for consistency with adopted development standards in the municipal code and City policies to evaluate and determine if the concerns warrant mitigation. The Proposal meets the City's parking regulations for the townhouses, small lot units and the attached accessory dwelling units. No additional mitigation for parking is necessary.

   The Land Division Ordinance and the zoning of the subject site support development with infill townhouse units and the opportunity for a density bonus if appropriately conditioned. The Land Division Ordinance addresses the interface between infill housing and single family zoned properties by requiring a transition of similar housing forms of the abutting residential single zoning. At this location, the Proposal is not subject to the lot-size transition as abutting properties are not developed (besides Fire Station #6).

   The onsite vegetation was evaluated for retention and as discussed below, the significant trees in the developable portion of the site will be removed with mitigation occurring on site.

9. March 12, 2024: The applicant informed the City that the public notice signs had been posted adjacent to Deemer Road.
10. August 16, 2024: Notice of the cluster plat public hearing was issued.

Tree Retention

11. A tree survey located all significant trees within the portion of the site anticipated to be developed with residential uses and their supporting infrastructure, in accordance with BMC 16.60.080(B)(4) (**Exhibit A**).
12. The survey identified 10 deciduous and 13 evergreen significant trees located outside of the critical areas. These trees are mostly located along the northern and westerly property lines. The critical areas are located mostly in the southern and eastern half of the site. This project is not subject to the recently adopted Landmark Tree Ordinance.
13. The portion of the site outside of the critical root zone of the significant trees and the critical areas is centrally located on the site and insufficient for accommodating development at a reasonable density. The developable area can be increased through tree removal and/or wetland buffer impacts.
14. The proposal is already seeking the maximum 25% buffer reduction to increase the buildable area. Additional buffer impacts are inconsistent with mitigation sequencing.
15. The applicant, through various meetings with City staff, has demonstrated that removal of the significant trees is necessary to provide a reasonable amount of development with the necessary infrastructure to serve the units.
16. BMC 16.60.080(B)(4) gives the City discretion to require replacement trees when significant trees are removed. Clearing is not listed as a special condition in the zoning table for Area 20 of the Meridian Neighborhood but mitigation for the loss of tree canopy should occur.

Mitigation should occur onsite at a ratio determined by the City that demonstrates 'right tree/right location' to ensure full maturity without creating conflicts with utilities and building locations. Mitigation should be determined through the review and approval of a final landscape plan and the species shall be deliberately chosen to ensure a mature canopy that fits the scale of the development.

Multifamily Design Review

17. The proposal is subject to multifamily design review pursuant to Chapter 20.25 BMC and in accordance with BMC 20.28.030(A), design review shall take into consideration the additional design standards and guidelines as specified under each infill housing type. Staff concurs with the applicant's justification how the proposal meets the design standards in the Multifamily Residential Design Handbook (MRDH) except for the following:

    a. MRDH – E. Windows requires the articulation of building facades by using well-proportioned and spaced windows. This requirement is met for all units except the portion of the exposed northern facing wall of unit 3. As proposed, this portion of wall does not include any windows. This provision could be met by installing the same window pattern in the living room and 3rd floor bedroom as the end elevations of Units 1 and 4.
    b. MRDH - I. Site Design concerning lighting is not met. The application materials did not include sufficient lighting information to determine compliance with this standard. Compliance with these standards should be demonstrated during building permit review which prioritizes safe lighting levels consistent with Crime Prevention Through Environmental Design principals for building entries, private usable spaces, pedestrian walkways and refuse areas. Lighting impacts on neighboring properties and the night sky should also be mitigated for.

18. Based on the exceptions noted above and the applicant's responses to the applicable multifamily design standards, the proposal meets the intent of these standards if appropriately conditioned to require development consistent with the application materials except as noted above concerning the specific design details.

Infill Housing

19. Chapter 20.28 BMC establishes the development regulations and design standards for the infill townhouse units. The proposal includes small lot and townhouse units.
20. The proposal generally complies with the infill housing provision for each housing type with the exception of the following:

    Pursuant to BMC 20.28.050:

    a. B. Density: The proposal includes a one-unit density bonus pursuant to the cluster land division provisions of BMC 23.08.040(C). Infill housing is allowed in single family zoned areas only if approved as part of a cluster land division. The cluster land division regulations allow density bonuses as may be approved by the hearing examiner. The density bonus provision appears to be met with at least 50% of the proposed dwelling units being infill housing units. However, this determination is decided by the hearing examiner through the land division review process.

b. F. Encroachments and Common Wall Development: Legal documents identifying the rights and responsibilities of property owners and/or the homeowners' association for use and maintenance of common facilities shall be submitted for approval by the Director and referenced on the final plat. The legal documents that are or may be necessary for this proposal include but are not limited to: use and access easements for pedestrian and vehicular access and parking, utility easements, and common wall agreements. Additionally, adequate measures to ensure the private infrastructure and landscaping will be maintained in perpetuity are needed for continued compliance with the permit decision. This permit should be conditioned to ensure that these documents are submitted to the City for review and approval prior to or concurrently with the final plat procedures pursuant to Chapter 23.20 BMC and referenced on the final plat.

c. G. Private Lanes, Common Pedestrian Corridors, and Alleys: Deemer Road and the proposed pedestrian corridor serving the townhouses provide the required abutment for the units. Therefore, the private driveway providing vehicular access to the units is an alley and not a lane. The alley is required to provide adequate emergency access to the townhouses and the single-family residence and must have an unobstructed width of 20 feet. The proposal complies with this.

   The proposed pedestrian pathway associated with the alley is not required but should be included in the overall design to break up the massing of the pavement. The pathway abutting Units B.1 and B.2 crosses the driveways for these units resulting in unnecessary conflicts between pedestrians and vehicles. Alternatively, the pathway abutting these units should be aligned with the pathway abutting Units B.2 and B.3 in a north / south direction.

d. H. Parking: Unit B.2 does not readily meet the required maneuvering areas per subsection (5)(c). However, if the pathway is relocated as discussed above, this provision can be met and therefore, this permit should be appropriate conditioned.

   The driveway for Unit B.1 is the required emergency turnaround and parking in this area is not permitted. The permit should be appropriately conditioned to ensure notice of this restriction is provided to the future residents of this unit.

Small Lot and Townhouse

21. BMC 20.28.070 and .140 provide the required development and design standards for small lot and townhouse units. The proposal meets or exceeds the applicable development regulations by utilizing a higher green factor score for the site, utilizing the front porch area allowance over the entire site and providing building designs with materials that provide appropriate textures to avoid the appearance of blank walls, if conditioned appropriate to include additional windows as recommended above.
22. The application materials did not include correspondence with Sanitary Services Company, Inc. (SSC). This permit should be appropriately conditioned to ensure approval from SSC is granted prior to issuing building permits for the proposal and the refuse areas are appropriately designed with the use of materials consistent with the proposal and designed to screen the refuse containers on at least 3 sides consistent with the municipal code.

23. Pursuant to BMC 20.28.140(D)(4), landscaping is required for the proposal with a green factor score of 0.3 for the small lots and 0.4 for the townhouses. The draft landscape plan included in **Exhibit A** is generally sufficient to demonstrate the required landscaping can be provided compliant with these code provisions. The final landscape plan should demonstrate the location, type and species of the plant material will not impact existing and proposed public infrastructure. This permit should be appropriately conditioned to require submittal of a final landscape plan for city review and approval prior to or concurrently with building permit application approval.

Accessory Dwelling Units

24. Each small house is proposed to have an attached accessory dwelling unit. Pursuant to BMC 20.10.036(B)(2), an ADU shall comply with all zoning code provisions for the primary dwelling unit, including height, setbacks, floor area, accessory buildings and open space, except as provided in this section. As discussed above, the small lots comply with the infill housing provisions and therefore, the A-ADUs comply provided the proposal complies with owner occupancy, the floor area limitations and parking regulations for ADUs.
25. The proposal is located in a single-family zoning area. Until the owner occupancy requirements are preempted by state law, the property owner shall submit an affidavit acknowledging owner occupancy pursuant to 20.10.036(B)(4).
26. Each A-ADU is less than the allowed 1,000 square feet and the required one parking stall per ADU is provided. The required parking stall dimensions for small house and ADU units are different. The small lot and ADU parking are provided in an open parking area. Open parking areas for infill housing units allow smaller stall dimensions than those for ADU units. Consistent parking dimensions should be allowed and the parking stall dimensions for the ADUs should have the option to conform with those for the small lots.

Critical Areas

27. The applicant provided a *Critical Areas Assessment* from a qualified professional (**Exhibit C)** which was completed for the property in advance of the development proposal. A report titled Critical Area Assessment was prepared by NW Ecological Services, dated February 2022, and submitted to the City on February 14, 2024. This meets Critical Area report requirements om BMC 16.55.210.

28. The wetlands were delineated and rated by a qualified professional, in accordance with BMC 16.55.280 and 16.55.290. The Assessment identified Wetland A as a Category III wetland and Wetland B as a Category IV.
29. Wetland A requires an 80-foot buffer and Wetland B requires a 50-foot buffer in accordance with BMC 16.55.340.B.2.
30. An assessment of probable cumulative impacts was completed, in accordance with BMC 16.55.210.C.6.
31. The proposal meets the definition of “high intensity land use”, in accordance with BMC 16.55.510.
32. A report titled *Impact Assessment & Mitigation Plan* (**Exhibit D)** was prepared by NW Ecological Services in January 2024 and submitted to the City on February 14, 2024. The proposed plan meets the review criteria in BMC 16.55.200 for alterations to critical areas and buffers. The Mitigation Plan satisfies mitigation requirements, in accordance with BMC 16.55.240,16.55.250, and 16.55.260.

33. Mitigation sequencing was applied in accordance with BMC 16.55.250 and was applied by the following:
    - Avoidance of wetland impacts was achieved; avoidance of buffer impacts was not possible because of lot coverage on the property.
    - Minimization included designing the project as far from the regulated critical areas as possible.
    - The project is designed to prevent untreated pollution-generating runoff from entering the wetland.
34. Mitigation for permanent buffer impacts is met through enhancing a larger area within the retained wetland buffer which will be protected by a conservation easement. The mitigation plants will result in a net increase of wetland buffer functions. An Impact analysis was prepared as required in BMC 16.55.210.C.7. A total of 2900 sf of impacts will occur to the buffer of Wetland A.
    a. Most of the onsite wetland buffer lacks native trees and shrubs and is primarily maintained lawn. The mitigation plan proposes to plant native trees and shrubs in the low functioning portion of the buffer which will result in a net increase of water quality improvement functions onsite.
    b. The project site is up gradient of the wetland and stormwater management will maintain drainage patterns and flow path of water entering the wetland. The trees and shrubs proposed in the mitigation plan may increase hydrologic functions by intercepting precipitation and slowing the velocity of surface runoff resulting in no net loss of hydrologic functions.
    c. The proposed mitigation plan will include planting trees and shrubs which will provide greater foraging and refuge opportunities for wildlife onsite and potential for a net increase in wildlife habitat functions is anticipated.
35. Wetland buffer reduction criteria in BMC 16.55.340.C.2 will be met, as conditioned. The project generally meets the standard 25 percent wetland buffer reduction, but the existing home is non-conforming to wetland buffer requirements. Proposed impacts include reducing a portion of the wetland buffer to a minimum of 60 feet to accommodate development. Category III wetland buffers can be reduced by 75 percent or 50 feet whichever is greater if criteria BMC 16.55.340.C.2 are met. The Mitigation Plan addresses all the criteria.
36. Buffer impacts will be mitigated at a 3.5:1 ratio in accordance with BMC 16.55.340 E. A total of 14,060 SF of buffer enhancement is proposed on the subject property. The goal of mitigation is to enhance Wetland A buffer functions through the planting plan and to preserve retained critical areas and associated buffers through a conservation easement and signage.
37. This specific proposal is within the Baker Creek watershed. Baker Creek is on the 303(d) list for high water temperature. The Mitigation Plan includes native plantings which are important within the watershed and will result in water quality improvement onsite.
38. The 15-foot building setback from the buffer will be reduced to 5 feet around the existing home and will be retained in the rest of the development, as allowed in BMC 16.55.340.G as there are no critical root zones of existing trees to protect.
39. The requirement to provide a line-item estimate of mitigation costs, in accordance with BMC 16.55.210, has been provided.
40. As conditioned, the proposal is consistent with the purpose and intent of BMC 16.55, it protects the critical area functions and values consistent with the best available science, and it results in no net loss of critical area functions and values.
41. Any Finding of Fact that should be denominated a Conclusion of Law shall be deemed a Conclusion of Law. Any Conclusion of Law that should be denominated a Finding of Fact shall be deemed to be a Finding of Fact.

Compliance with BMC

42. Based on the findings of fact and conclusions of law within this permit, the City concludes that the proposal meets the applicable provisions of Chapters 16.55, 20.25 and 20.28 BMC if appropriately conditioned. Any additional permit required to construct the infrastructure and/or buildings associated with the proposal must be consistent with this decision and the BMC.

V. DECISION AND CONDITIONS

Based upon the Findings of Fact and Conclusions of Law, the Director of the Planning and Community Development Department (PCDD), or designee approves the Consolidated Permit for design review, accessory dwelling units and critical areas subject to the following conditions:

A. GENERAL

1. All development and use of the property legally described in Sections I and II of this permit shall be generally consistent with the permit plans attached in Section III, except as modified by this permit, and all other conditions contained in the permit.
2. Development of the property shall be consistent with all applicable provisions of the Bellingham Municipal Code and does not excuse the applicant from compliance with any other federal, state, or local statutes, ordinances or regulations that may be applicable to this project.
3. Prior to approval of any building or construction permits, the City shall determine compliance with the terms and conditions of this permit and the municipal code.
4. Legal documents identifying the rights and responsibilities of property owners and/or the homeowners' association for use and maintenance of common facilities shall be submitted for approval by the city and recorded concurrently with the recording of the final plat and referenced on the final plat. The legal documents that are or may be necessary for this proposal include but are not limited to: use and access easements for pedestrian and vehicular access and parking, utility easements, and common wall agreements. Additionally, adequate measures to ensure the private infrastructure and landscaping will be maintained in perpetuity are needed to ensure compliance with the permit decision.
5. A public facility construction agreement shall be obtained from the City prior to installation of any public infrastructure necessary to support the Proposal.
6. All applicable impact fees approved by City ordinance shall be paid prior to building permit issuance.
7. Development of the property relies on approval of the Diamond Deemer Preliminary Plat (SUB2024-0007) and all conditions of the hearing examiner approval shall be deemed conditions of this consolidated permit. This permit decision shall be deemed null and void if the preliminary plat is not approved or conditionally approved in a manner determined inconsistent with this permit. The applicant may re-apply for a new infill/design review permit consistent with the cluster preliminary plat decision.
8. The City may impose additional conditions if found that sufficient information was not present with the applications to comply with the Bellingham Municipal Code.

B. DESIGN REVIEW AND INFILL HOUSING

1. All townhouse units within individual townhouse buildings shall be built concurrently. Townhouse buildings shall generally be built in clusters as shown on the proposed site plan. Infrastructure such as vehicular and pedestrian access and utilities shall be constructed and installed prior to or concurrently with the development of the townhouse buildings.
2. Development under this permit may be phased. Prior to allowing phased development, the applicant shall demonstrate how each townhouse building within a phase meets all applicable terms and conditions of this permit and complies with all applicable development and design regulations.
3. All buildings shall be constructed and finished with the level of detail shown and described on **Exhibit A**, including, but not limited to siding material and direction, roof pitch, window wrap, trim, window size and placement, and front porch details.
4. The site plan elements shown and described in **Exhibit A**, except as modified by this permit, shall be provided concurrently with the development of the associated structures.
5. The pedestrian pathway abutting Units B.1 and B.2 shall be realigned in a north-south orientation as an extension of the pathway abutting Units B.3 and B.4.
6. The landscape plan in **Exhibit A** is approved as a preliminary design. A final landscape plan pursuant to BMC 20.28.070 and .140 shall be submitted for review and approval by the City prior to or with the first building permit application for any building. Landscaping required to meet the green factor requirement may be placed within city rights of way upon approval by the city. The final landscape plan shall demonstrate the location, type and species of the plant material. The required tree replacements shall be included in the final landscape consistent with the intent of this permit as discussed above to ensure the trees can grow to maturity while not impacting existing and proposed public infrastructure or the site's structures. Financial sureties may be required by the city for installation and maintenance of all landscaping.
7. Garbage collection. Any outside trash and recycling facilities shall be screened from view on at least three sides and constructed with durable materials consistent with the architecture of the townhouse buildings. The final location of these facilities shall be approved by Sanitary Services Company and may not conflict with any performance standards in the Bellingham Municipal Code.
8. The Developer shall submit a site lighting plan for review and approval by the city concurrent with the first building permit application for the proposal. The lighting plan shall address the applicable design standards for infill housing and the ADUs and be sized, shielded, and directed to avoid adverse impacts and spillover onto adjacent properties. The lighting plan shall include the following information:

    a. A photometric site plan, drawn to scale, showing all buildings, walkways and parking areas, fixture and pole height, and include all proposed exterior lighting fixtures and foot-candle spread. Outdoor lighting shall not exceed 1.5-foot candles at the property line.

    b. Design specifications for all proposed exterior lighting fixtures shall include photometric data, cutoff devices, bulb wattage/type, and other descriptive information.

    c. The lighting must also be, as much as physically possible, contained to the developed area and not spill over into the regulated wetland areas.

C. Accessory Dwelling Units

1. Pursuant to BMC 20.10.036(B)(4)(b), the property owner shall submit an affidavit acknowledging the owner occupancy requirement.

D. Critical Areas

1. 1. Prior to the issuance of a building permit and site disturbance, a conservation easement for the regulated critical area shown in **Exhibit D** shall be recorded with the Whatcom County Auditor's Office. To prepare the conservation easement document, the applicant shall provide a legal description of the property, a legal description of the conservation easement area, and a legal drawing of the conservation easement area prepared by a licensed surveyor. A lot closure report and current subdivision guarantee shall be provided with the exhibits for city review; the city will prepare the text.

2. Prior to the issuance of a building permit and site disturbance, financial surety for the estimated costs for the mitigation program (Estimated in **Exhibit D)** $24,645.00 shall be submitted to the city on forms provided by the city. If changes to the mitigation are proposed, then the estimated cost shall be adjusted accordingly. The surety shall be fully executed with city signatures before this condition is considered satisfied. The party initially providing the surety shall remain responsible for maintaining the surety through the duration of the mitigation maintenance and monitoring period required by the City unless the City approves, in writing, the transfer of responsibility for maintaining the surety to another party.

3. Prior to the issuance of a building permit and any site disturbance, the project clearing limits shall be surveyed, marked, and a temporary construction fence installed and inspected by City Planning staff and the project's wetland biologist.

4. The conservation easement area shown in **Exhibit D** shall remain free of materials and equipment of any kind for the entire duration of the construction to avoid damage to vegetation, critical root zones, and soil compaction.

5. Mitigation for wetland buffer impacts shall be done in accordance with the Mitigation Plan, **Exhibit D**. Mitigation site preparation shall follow the details in the "Site Preparation" section of the Mitigation Plan. All tasks necessary to implement the mitigation plan shall be done by a mitigation contractor with at least five years of experience installing wetland buffer mitigation projects.

   All plants shall be marked on side branches with colored flagging for easy identification and monitoring. Failure to follow this condition may result in all or portions of the mitigation work being re-done by an ecological restoration specialist. Mitigation plants shall be installed between October 31st-—March 15th immediately following issuance of a building for construction of the new residence. If this schedule cannot be met due to construction timing, the applicant shall request written approval from the city to postpone implementation of the mitigation at which time the city will establish a new deadline.

6. Wood chip mulch (not beauty bark) shall follow the specifications on page 13 of **Exhibit D.** The mitigation as-built report shall include the dimensions of the mulch rings applied to the plants and the type of mulch used.

7. Outdoor lights shall be shielded to prevent spillover into the wetland buffer area. Shielding shall be shown on the building permit plan set.

8. Prior to the final building permit inspection by the staff planner, the Native Growth Protection Area (NGPA) signs and split rail fence shall be installed. The signs shall be as specified in **Exhibit D.** Failure to use this spec shall result in replacement at the applicant's expense. The signs shall be installed approximately as shown in **Exhibit D.** They can be secured to the split rail fence.

9. The mitigation as-built report prepared by the project wetland biologist shall be submitted within 30 days of completion of the mitigation prep including installation of the NGPA signs and split rail fence, and in no case later than December 31, 2024. The as-built report shall also include color photos of the mitigation area, NGPA signs and fence. It shall also include the list of plants installed, the installer, and the type and source of mulch used. A site visit with the staff planner shall be scheduled by the applicant within 30 days of submittal of the as-built report. There shall be no release of financial surety until after the inspection the city finds that the mitigation was properly installed.

10. Annual monitoring reports from the project wetland biologist shall be submitted to the staff planner by November 30th for five consecutive years. The first monitoring report shall be submitted the year after the first full growing season that has occurred after the mitigation planting has been completed.

11. Maintenance of the mitigation areas shall be conducted in accordance with the Mitigation Plan (**Exhibit D**) and the maintenance activities, and needed corrections, reported in the annual monitoring report.

VI. AMENDMENTS

Amendments to this Permit may be requested by the owner and approved by the Director in writing, provided such amendments do not substantially change or alter major elements of the project.

VII. EXPIRATION

This Consolidated Permit is valid for five (5) years pursuant to BMC 21.10.260 (C)(3).

VIII. EFFECTIVE DATE

The Critical Area Permit shall be effective after the close of the appeal period, or if an appeal is filed, after the withdrawal of, or final decision on an administrative appeal (BMC 21.10.240 (C)(3)). Therefore, the effective date of this permit is August 30, 2024, unless an appeal is filed.

IX. APPEAL

Pursuant to BMC 21.10.100(G) and .110(K), this combined permit may be appealed within 14-days from the date of the Notice of Decision to the City's Hearing Examiner. Procedures for appeal to the Hearing Examiner are contained within BMC 21.10.250. Any appeal must be filed with the Planning and Community Development Department on the appropriate forms and be accompanied by a filing fee as established by the City Council prior this established appeal period.

Prepared and approved by:

Kathy Bell

Kathy Bell, Sr. Planner

Amy Dearborn, Planner II

Permit Center
210 Lottie Street, Bellingham, WA 98225
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Land Use Application

Check all permits you are applying for in the boxes provided. Submit this application form, the applicable materials listed in the corresponding permit application packet(s) and application fee payment.

☐ Accessory Dwelling Unit ☐ Binding Site Plan ☐ Clearing Permit ☐ Conditional Use Permit ☐ Critical Area Permit ☐ Minor Critical Area Permit ☐ Design Review ☐ Grading Permit ☐ Home Occupation ☐ Institutional ☐ Interpretation ☐ Landmark – Historic Certificate of Alteration ☐ Legal Lot Determination ☐ Nonconforming Use Certificate	☐ Parking Adjustment Application ☐ Planned Development ☐ Rezone ☐ SEPA ☐ Shoreline Permit ☐ Shoreline Exemption ☐ Short Term Rental ☐ Subdivision-Short Plat/Lot Line ☐ Adjustment ☐ Subdivision-Preliminary Plat ☐ Subdivision-Final Plat ☐ Variance ☐ Wireless Communication ☐ Zoning Compliance Letter ☐ Other: Infill Toolkit	**Office Use Only** Date Rcvd: Case #: Process Type: Neighborhood: Area Number: Zone: Pre-Ap. Meeting: Concurrency:

Project Information

Project Address 4056 Deemer Rd Zip Code 98226

Tax Assessor Parcel Number (s) 380318 195488 0000

Project Description Construction of 4 new ITK townhouses, 3 new ITK small homes, 3 new attached ADUs, retention of one existing SFR. See narrative for details

Applicant / Agent

☐ Primary Contact for Applicant

Name

Mailing Address 1708 F street

City Bellingham State WA Zip Code 98225

Phone 360-527-9445 Email

Owner (s)

☐ Applicant ☐ Primary Contact for Applicant

Name

Mailing Address 5421 Selmaraine Dr

City Culver City State CA Zip Code 90230

Phone Email

Property Owner(s)

I am the owner of the property described above or am authorized by the owner to sign and submit this application. I grant permission for the City staff and agents to enter onto the subject property at any reasonable time to consider the merits of the application and post public notice. I certify under penalty of perjury of the laws of the State of Washington that the information on this application and all information submitted herewith is true, complete and correct.

I also acknowledge that by signing this application I am the responsible party to receive all correspondence from the City regarding this project including, but not limited to, expiration notifications. If I, at any point during the review or inspection process, am no longer the Applicant for this project, it is my responsibility to update this information with the City in writing in a timely manner.

Signature by Owner/Applicant/Agent _____, Date 01.22.24

City and State where this application is signed: Bellingham (City), WA (State)

Planning and Community Development Department
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DESIGN REVIEW – RESIDENTIAL, MIXED-USE AND INFILL HOUSING

(PROCESS TYPES I AND II)

Design review applications are processed through a Type I or Type II review process pursuant to BMC 21.10.040 as follows:

Type II applications: Design review for projects that:

- Require a SEPA threshold decision; or
- Include construction of a new building; or
- Include an exterior non-residential addition to an existing building; or
- Consist of more than 4 infill housing units pursuant to Chapter 20.28 BMC; or
- Include an exterior addition of one or more residential units.

Type I applications:

- Design review for projects that are not required to use a Type II process.

Pre-Application Steps:

☑ Pre-Application conference with staff or waiver.
Identify permit number: PRE 2022-0076

☑ Pre-Application neighborhood meeting or waiver.
Identify permit number: PRE 2022-0076

☑ Transportation concurrency certificate, if applicable.
Identify permit number: CON 2023-0010

Pre App waiver filed for new application.

Neighborhood Meeting waiver filed for new application.

Updated Tcon applied for with Public Works for new application.

Application Submittal Requirements:

☑ A completed Land Use Application form.

☑ A completed Design Review Application, including all information required by this form.

☑ All completed land use applications for the development requiring a Type I, II or III land use review process, unless otherwise approved by the Planning and Community Development Director.

N/A ☑ A completed Legal Lot Application form, unless specifically waived.

☑ Project narrative that includes:

- ☑ Written description of how the project meets each applicable design standards of the Multifamily Residential Design Handbook.
- ☑ Responses to the guidance provided by City staff at a pre-application conference and comments raised at the pre-application neighborhood meeting.

N/A ☑ Requested departures from the design standards or modifications for infill housing proposals, along with an explanation how the departure/modification criteria are met for each departure.

☑ Infill housing. A detailed description of how the proposal meets applicable design standards for each housing type and those found in BMC 20.28.050.

☑ Infill housing worksheets attached to this application, as applicable.

☑ Project Data Worksheet-Residential attached to this application, as applicable.

N/A ☑ SEPA Checklist, if applicable.

☑ Application fee payment(s).

☑ Mailing list and labels as described in the attached mailing list instructions for Type II applications.

Detailed Submittal Requirements:

The following are submittal requirements that shall be prepared and submitted in electronic format as a .pdf document that conforms to the provisions of Chapters 17.90 and 20.25 BMC, unless otherwise determined by the City:

☑ The applications submittals required above by this form.

☑ Preliminary stormwater management report consistent with Chapter 15.42 BMC. On DR Civil Sheet.

☑ If proposal includes land division, all other applications determined necessary to process the proposed preliminary plat consistent with the Bellingham Municipal Code.

☑ Narrative addressing how the proposal addresses Special Conditions, Prerequisite Considerations and Special Regulations associated with the zoning for the subject site.

☑ Additional material as determined by the City to review the proposal consistent with the Bellingham Municipal Code.

NOTE: The following materials shall be scaled with standard architectural or engineering. The scale must allow clear depiction of all required information, typically between ¼" = 1' and 1/8" = 1'; and 1” = 10’ and 1” = 40’.

☑ A vicinity map that clearly identifies the proposal in relation to the surrounding land for a distance of at least a quarter of a mile and additional area, as necessary, to show connecting streets or arterials.

☑ An existing conditions map that includes the following :

- ☑ All lot lines and site boundary dimensions.
- ☑ Significant trees pursuant to BMC 16.60.040 located on and near the subject site, which includes the species and diameter at breast height (dbh) of each tree.
- ☑ Abutting right(s) of way, including widths, name and improvements.
- ☑ Utilities, including public and private water, sewer and stormwater mains and services.
- ☑ Public and private easements affecting the subject site.
- ☑ Critical areas on the site, and within 150 feet of the site boundaries and affecting the site, including buffers and building setbacks pursuant to Chapter 16.55 BMC.
- ☑ Topography at 5-foot intervals or less.

- ☑ Location, dimensions, gross floor area of existing structures on-site and their distances to proposed and existing property lines.
- N/A ☑ Location, dimensions and height of existing structures off-site within 10' of common property lines, including windows and entries facing common property line.
- ☑ Location and dimensions of existing on-site paved areas.

☑ A site plan showing the proposed development that includes the following:

- ☑ Existing and proposed structures and their distances to existing and proposed property lines.
- ☑ Proposed lots and tracts, if applicable.
- ☑ Existing and proposed public rights of way, state highways and public open space tracts, trails and parks. Include street name, right of way width, and location of existing improvements such as sidewalk, curb, medians, bus stops, overhead utility lines, street trees, streetlights and street improvement width. Note any proposed changes to the street design.
- ☑ Significant trees labeled for retention or removal, identifying the location of the critical root zone (CRZ), pursuant to BMC 16.6.0.040, and the type of fencing to be used to protect the CRZ of the retained trees during construction. The City places a high value on preservation of significant healthy native trees and natural features. Depending on the degree development affects the retention of these trees and/or natural features, the City may require additional studies demonstrating alternative approaches to development that balance the City's objectives to infill underutilized developable lands and preserve mature native vegetation.

  Significant trees proposed for removal may require submittal of an arborist report prepared by an ISA certified arborist to substantiate the removal of significant trees demonstrating why preservation is not a viable option. Removal of significant trees may require the planting of replacement trees at a ratio to be determined during land use review.
- ☑ Proposed grading/final contours at 5-foot intervals or less
- ☑ Existing and proposed public and private easements.
- ☑ Critical areas on and affecting the site, including buffers and building setbacks.
- ☑ Existing and proposed public infrastructure necessary to serve the proposed development, including rights of way, water, sewer, stormwater, fire hydrants, etc.

  NOTE: The preliminary plan shall be designed or reviewed by a Civil Engineer registered with the State of Washington for conformance with regulations. The City may ask for information to corroborate the preliminary design. Any regulatory deficiencies in the proposed storm water plan are wholly the responsibility of the proponent and/or the engineer. You may be required to apply for amendments to land use and design permits if there are changes in the final storm water facilities that affect the site design.

- ☑ Existing and proposed street improvements consistent with the City of Bellingham's approved street construction details.
- ☑ Location and dimensions of proposed refuse collection areas.
- TBD ☐ Location and type of proposed exterior lighting, including parking, pedestrian walkway and building.
- N/A ☐ Location of proposed signs.

- ☑ A preliminary landscape plan that includes the following:
  - ☑ General location and type of proposed trees, shrubs and ground cover that is necessary to comply with the applicable landscaping requirements of the Bellingham Municipal Code.
  - ☑ Completed Green Factor Score sheet if, applicable.
  - ☑ Existing vegetation to be retained pursuant to BMC 16.60.080(B)(4).
  - ☑ Location and species of replacement trees required as mitigation for the removal of significant trees.
  - ☑ Abutting street right(s) of way.
  - N/A ☐ Location, height, top elevation, width and designs of rockeries, retaining walls and fences. Cross sections may be required.
  - ☑ Surface and subsurface stormwater facilities.
  - ☑ Buildings and all hard surfaced areas.
  - ☑ Topography at 5-foot intervals or less.
  - ☑ Critical areas and proposed buffers, and associated mitigation plantings, if applicable.

- ☑ Architectural plans that include the following:
  - ☑ New buildings and additions:
    - ☑ Building elevations showing:
      - All facades with shadowing to modulation of walls and roof forms.
      - Door and window treatments.
      - Awnings.
      - Artwork
      - Exterior lighting
      - Building materials
      - Type of window glazing
      - Mechanical equipment and screening methods
      - Colors, etc.
    - N/A ☐ Contextual street elevations showing the proposed building in relation to adjacent buildings.
    - ☑ Perspective drawings, color rendering or other three-dimensional representations to adequately illustrate the proposal.
    - ☑ Dimensioned floor plans with uses labeled, including structured parking.
    - N/A ☐ Signs.

- N/A ☐ Exterior alterations:
  - ☐ Include all information required for new buildings and additions.
  - ☐ Clearly identify existing features to be retained.

PROJECT DATA WORKSHEET –
MULTIFAMILY RESIDENTIAL AND MIXED USE DEVELOPMENT

Provide the following information for proposed residential and mixed-use developments requiring design review approval. Use definitions and calculation methods in Title 20 BMC.

1. Zoning:
   Neighborhood and Subarea: Meridian Area 20

   General Use Type: Residential Single Use Qualifier: Planned

   Density: 10,000 sq ft base, bonus to 4,300 sq ft

2. Parent Lot Size: ~44,000 sq ft

3. Minimum Density: N/A units Maximum Density: 10 units units

   NOTE: Pursuant to BMC 20.32.010(B)(1), detached single-family development in Residential Multi zones shall not exceed 25% of the total number of units proposed for a development.

4. Total units: 8 7 new, 1 existing + 3 ADU's

   Multifamily: _____ Infill Housing 7 Detached Single-Family 1

5. Commercial floor area: N/A

6. Total number of parking spaces required/proposed:

   Commercial: 0 / 0 Residential: 13 / 17

   Parking adjustment requested: _____ Yes X No

   **If yes, a parking adjustment application must be submitted concurrently with this design review application.

   Each townhouse has a 2 car garage, the existing SFR has a 2 car surface parking. Each small house has 1 surface stall. Each ADU has 1 surface stall. There is 1 unassigned stall.

7. Total number of bicycle parking spaces required/proposed:

   Commercial: 0 / 0 Residential: 0 / 0

   Bike parking to be located in unit garages, no common bike facility is proposed.

PROJECT DATA WORKSHEET - MULTIFAMILY

Provide the following information for proposed Multifamily development. Use definitions and calculation methods in Title 20 BMC.

If the project is located in a Planned land use district (Use Qualifier) or has applied for a City of Bellingham multifamily tax exemption, enter the development contract or application number:

Not applicable: x All units SF or ITK Contract/application number: ADM_____

	Studio	1-bedroom	2-bedroom	3-bedroom	4-bedroom
Existing Units	0	0	1	0	0
Proposed Units	0	0	3 + 3 ADU (6)	4	0
Demolished Units	-0	-0	-0	-0	-0
Total Net Units	0	0	4 + 3 ADU (7)	4	0

N/A

Lot Coverage: _____ sq. ft. _____ % of site

Open Space: _____ sq. ft. _____ % of site

Total useable space: _____ sq. ft.

Private: _____ sq. ft. Common: _____ sq. ft.

Project is designed to meet ITK regulations for Open Space, FAR, etc... all information in table on DR Sheet 2.

Describe type of useable space provided (decks, yards, recreation buildings, type of recreational facilities and equipment pursuant to definition of usable space (BMC 20.08.020):

Each Townhouse Unit will have a private front yard facing a common pedestrian corridor as well as decks. Each Small House will have a private front porch and front yard facing Deemer.

Each ADU will have a private front porch/deck facing Deemer. The existing SFR will have a private yard area surrounding the house.

N/A Check Yard Setback Options Taken:

☐ None ☐ Side yard window wall ☐ Rear yard window wall

☐ Side yard wall without window ☐ Rear yard wall without window

Height of tallest building: <35' feet under definition #1

Height of tallest building: _____ feet under definition #2

INFILL HOUSING DATA WORKSHEET

A separate worksheet is required for each lot and/or housing type that are not of common size or design.

INFILL HOUSING TYPE:

- [X] Small Lot
- [ ] Cottage
- [ ] Duplex
- [ ] Triplex
- [ ] Fourplex
- [ ] Shared Court
- [ ] Garden Court
- [X] Townhouse

There are 7 Infill Toolkit Units in two styles, 4 Townhouses (all identical) and 3 Small Homes (all identical). Each Small Home will have a 2nd story attached ADU for a total of 3 new ADU's.

PARCEL INFORMATION

Lot size (if land division is proposed): 1 Acre

Number of units: 7 ITK

Lot Size Table (sq ft):
Lot 1 - Small Lot - 1,938
Lot 2 - Small Lot - 1,938
Lot 3 - Small Lot - 2,080
Lot 4 - Townhouse - 2,487
Lot 5 - Townhouse - 2,133
Lot 6 - Townhouse - 2,435
Lot 7 - Townhouse - 3,244
Lot 8 - Existing SFR - 18,843
Common Tract - 8,464

SITE PLAN INFORMATION

Total parking spaces: 17 Required 13 Provided

Total open space (measured in square feet): 27,331 SF (62.7%)

Green factor score: .4 (Attach Green Factor Worksheet)

Total usable space: ~ 1,400 SF (for Townhouses) (Provide narrative to describe proposed usable space amenities pursuant to BMC 20.08.020 - 'Usable space' definition.) See project narrative and plans.

BUILDING INFORMATION

Total floor area per building (measured in square feet): _____ 4 Townhouse units at ~ units at ~2,348 sq ft each (including garage). 3 Small House units at ~880 sq ft each (no garages). 3 ADU's at ~880 sq ft each (no garages).

Floor area ratio: _____ FAR for Townhouses is .56, FAR for Small Lot is 1,200 SF per lot.

Building height: <35' Definition #1 _____Definition #2 (Attach height worksheet) See plans, Sheet A3.01

Project Data Worksheet:

1. Zoning Data:

   Neighborhood: Meridian Subarea: 20 Zoning: Residential single, planned

2. ADU Type:

   ☒ **Attached ADU (A-ADU)** N/A

   ☐ **Detached ADU (D-ADU)**

   ☐ **Detached ADU (D-ADU) within/attached to Detached Accessory Building**

3. Primary residence is:

   Single Family in a Residential Single zone

   ☐ Single Family in a Residential Multi zone

   ☒ Infill Toolkit housing unit

4. Owner occupancy is required. ☒ Yes ☐ No

   The property owner is required to live on site if the ADU is in a residential-single zone. An affidavit of owner occupancy is required to be submitted to PCDD prior to issuance of building permit. Templates are available at the Permit Center or through the PCDD Permit Portal.

5. Floor area of:

   ☐ Primary residence: 880 sq. ft.

   ☐ ADU: 880 sq. ft.

   ☐ Combined floor area of ADU/accessory bldg.: 1760 sq. ft.

6. Height of D-ADU: _____

7. Number of bedrooms (BRs) in the proposed ADU:

   ☐ Studio ☐ 1-Bedroom ☒ 2-Bedrooms ☐ _____-Bedrooms

8. Open space provided: 27,331 Sq. ft; 62.7% Percent of lot

9. Number of parking spaces provided:

   ☐ Primary residence: 1 on site _____ on street

   ☐ ADU: 1 on site _____ on street

   ☐ None provided. The ADU is located within one-half mile walking distance to a **major transit route**

   ☐ Waiver with minor modification requested.

10. Minor modification(s) requested for ADU? Y / (N)

    ☐ If yes, provide a separate sheet explaining how each requested modification individually satisfies the minor modification criteria in BMC 20.10.036(B)(3).

Project Data Worksheet:

1. Zoning Data:

   Neighborhood: Meridian Subarea: 20 Zoning: Residential single, planned

2. ADU Type:

   ☒ **Attached ADU (A-ADU)** N/A

   ☐ **Detached ADU (D-ADU)**

   ☐ **Detached ADU (D-ADU) within/attached to Detached Accessory Building**

3. Primary residence is:

   Single Family in a Residential Single zone

   ☐ Single Family in a Residential Multi zone

   ☒ Infill Toolkit housing unit

4. Owner occupancy is required. ☒ Yes ☐ No

   The property owner is required to live on site if the ADU is in a residential-single zone. An affidavit of owner occupancy is required to be submitted to PCDD prior to issuance of building permit. Templates are available at the Permit Center or through the PCDD Permit Portal.

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   ☐ Primary residence: 1 on site _____ on street

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   ☐ None provided. The ADU is located within one-half mile walking distance to a **major transit route**

   ☐ Waiver with minor modification requested.

10. Minor modification(s) requested for ADU? Y / (N)

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Project Data Worksheet:

1. Zoning Data:

   Neighborhood: Meridian Subarea: 20 Zoning: Residential single, planned

2. ADU Type:

   ☒ **Attached ADU (A-ADU)** N/A

   ☐ **Detached ADU (D-ADU)**

   ☐ **Detached ADU (D-ADU) within/attached to Detached Accessory Building**

3. Primary residence is:

   Single Family in a Residential Single zone

   ☐ Single Family in a Residential Multi zone

   ☒ Infill Toolkit housing unit

4. Owner occupancy is required. ☒ Yes ☐ No

   The property owner is required to live on site if the ADU is in a residential-single zone. An affidavit of owner occupancy is required to be submitted to PCDD prior to issuance of building permit. Templates are available at the Permit Center or through the PCDD Permit Portal.

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   ☐ Combined floor area of ADU/accessory bldg.: 1760 sq. ft.

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   ☐ Studio ☐ 1-Bedroom ☒ 2-Bedrooms ☐ _____-Bedrooms

8. Open space provided: 27,331 Sq. ft; 62.7% Percent of lot

9. Number of parking spaces provided:

   ☐ Primary residence: 1 on site _____ on street

   ☐ ADU: 1 on site _____ on street

   ☐ None provided. The ADU is located within one-half mile walking distance to a **major transit route**

   ☐ Waiver with minor modification requested.

10. Minor modification(s) requested for ADU? Y / (N)

    ☐ If yes, provide a separate sheet explaining how each requested modification individually satisfies the minor modification criteria in BMC 20.10.036(B)(3).

Permit Center
210 Lottie Street, Bellingham, WA 98225
Phone: (360) 778-8300 Fax: (360) 778-8301 TTY: (360) 778-8382
Email: permits@cob.org Web: www.cob.org/permits

PRELIMINARY PLAT APPLICATION

(PROCESS TYPE III-B)

This application form is for a preliminary plat and preliminary cluster plat requiring a Type III-B process.

Pre Application and Neighborhood Meeting waiver for revised project. Tcon updated for revised project.

Pre-Application Steps:

- ☑ Pre-Application conference or waiver. Identify permit number: PRE 2022-0076
- ☑ Pre-Application neighborhood meeting or waiver. Identify permit number: PRE 2022-0076
- ☑ Transportation concurrency certificate, if applicable. Identify permit number: CON 2023-0010

Application Submittal Requirements:

- ☑ A completed Land Use Application form.
- ☑ A completed Preliminary Plat Application, including all information required by this form.
- ☑ A completed Legal Lot Application form, unless specifically waived.
- ☑ Written response to the performance criteria pursuant to BMC 23.08.030.
- ☑ Written response to the decision criteria pursuant to BMC 23.16.030.
- N/A ☑ A completed Departure and/or Variance Application form(s), if a departure and/or variance is requested.
- N/A ☑ SEPA Checklist, if applicable.
- ☑ Application fee payment.
- ☑ Mailing list and labels as described in the attached mailing list instructions.

Project Data:

1. Name of Plat Diamand Deemer Subdivision
2. Number of Lots 8
3. Civil Engineer information:

   Name: Freeland & Associates Inc

   Address: 2500 Elm Street, Suite 1

   Phone number: 360 650 1408

   Email: jpslagle@freelandengineering.com

4. Surveyor information:

   Name: NW Survey & GPS

   Address: 407 5th Street, Lynden, WA 98264

   Phone number: 360 354 1950

   Email: jeromy@nwsurvey.com

Submittal Requirements:

The submittal requirements shall be prepared and submitted in electronic format as a .pdf document that conforms to the provisions of Title 23 BMC, unless otherwise determined by the city:

- ☑ The application submittal materials required by this form.
- ☑ A vicinity map that clearly identifies the proposal in relation to the surrounding land for a distance of at least a quarter of a mile and additional area, as necessary, to show connecting streets or arterials.
- ☑ An existing conditions map prepared by a Washington State certified land surveyor or licensed engineer that includes the following :
  - ☑ Scale between 1" = 10' and 1" = 20'.
  - ☑ All parcels and ownership of those parcels within 300 feet of the preliminary plat boundaries.
  - ☑ Rights of way, including widths, name and improvements.
  - ☑ Utilities, including public and private water, sewer and stormwater mains and services.
  - ☑ Public and private easements affecting the subject site.
  - ☑ Critical areas on and affecting the site, including buffers and building setbacks.
  - ☑ Topography at 5-foot intervals.
  - ☑ Existing structures on-site and their distances to proposed and existing property lines.
  - ☑ Location and dimensions of existing on-site parking areas.

- ☑ A plat map prepared by a Washington state certified land survey or licensed engineer, that includes the following:
  - ☑ Scale between 1" = 10' and 1" = 20'.
  - ☑ Legal description of the area being subdivided.
  - ☑ Proposed lots and tracts.
  - ☑ Proposed lots that are identified and labeled as Lot 1, Lot 2, etc. and tracts as Tract A, Tract B, etc.
  - ☑ Proposed area of each lot and tract.
  - ☑ Statement for the intended purpose of each tract (i.e. stormwater, open space etc.)
  - ☑ Existing and proposed public rights of way, state highways and public open space tracts, trails and parks pursuant to BMC 23.08.030(E), (F) and (G).
  - ☑ Existing and proposed utility easements that affect the proposed preliminary plat.
  - ☑ Critical areas on and affecting the site, including buffers and building setbacks.
  - ☑ Existing structures and their distances to proposed and existing property lines.

- ☑ A street and utility service plan prepared by a Washington state licensed engineer that includes the following:
  - ☑ Scale between 1" = 10' and 1" = 20'.
  - ☑ Existing and proposed public infrastructure necessary to serve the proposed preliminary plat, including rights of way, water, sewer, stormwater, etc.
  - ☑ Existing and proposed street improvements consistent with the city of Bellingham's approved street construction details.
  - ☑ Topography at 5-foot intervals.

- ☑ A preliminary clearing and grading plan pursuant to BMC 23.08.030(C) and (D) that shows retention of natural features and existing and proposed grades of lots and public rights of way. See DR civil sheet.

- ☑ Preliminary stormwater management report consistent with Chapter 15.42 BMC for proposals that will generate 5,000 square feet of new or replaced impervious surfaces. See notes on DR civil sheet.
- ☑ A plat certificate, subdivision guarantee or Title report dated within 30 days of application submittal.
- ☑ All other applications determined necessary to process the proposed preliminary plat consistent with the Bellingham Municipal Code.
- ☑ Additional material as determined by the city to review the proposal consistent with the Bellingham Municipal Code.

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CRITICAL AREA PERMIT

(PLEASE PRINT CLEARLY OR TYPE IN BLUE OR BLACK INK)

The intent of the Critical Area Ordinance (Bellingham Municipal Code 16.55) is to designate and classify environmentally sensitive and hazardous areas and to protect, maintain, and restore these areas and their functions and values while also allowing for reasonable use of public and private property. To determine if a proposed activity or area is subject to the ordinance contact the Planning Division staff.

SUBMITTAL CHECKLIST – Your application will not be accepted unless all of the following are submitted:

■ Pre-Application conference or waiver
- Required for applications that include a SEPA checklist (*Type II*).

■ Land Use Application form and associated information outlined in the Critical Area Permit Packet
- All requested information must be provided.

■ Filing fee
- Applicable fee as calculated by Planning staff. (*See separate Fee Schedule*)

■ List of surrounding property owners *(For Type II & Type III-A applications only)*
- Complete the attached Names and Mailing Addresses of Surrounding Property Owners for property **within 500 feet**.

N/A ☐ SEPA Environmental checklist
- Submit if required (*including any wetland impacts – consult Planning Staff*)

■ Critical Area Report & Maps (*Two 11" x 17" or larger scaled copies and one 8 ½" x 11" reduction*)
- See the attached Critical Area Report and Map Checklist for requirements.

■ Specific Report
- The following reports are required depending on the type of critical area(s) impacted:

  ■ Wetlands and their buffers ☐ Frequently flooded areas ☐ Geologically hazardous areas

  ☐ Fish and wildlife habitat conservation areas (*including streams*)
- Reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area. (*See the specific checklist for report requirements*)

■ Associated Land Use Applications
- Consult with Planning staff to determine if other land use permits are required.
- All Type II applications must be submitted concurrently.

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CRITICAL AREA REPORT CHECKLIST

A Critical Area Report is required for all applications (BMC 16.55.210). The report must be prepared by a "qualified professional", as defined in BMC 16.55.510. All reports may require additional information as determined by the Planning Director. The Planning Director may approve a Critical Area Report supplemented by or composed of any previous studies required by other laws and regulations.

At a minimum, the report shall contain the following (BMC 16.55.210 C):

- ▣ The name and contact information of the applicant, a description of the proposal, and identification of the permit requested;
- ▣ Maps and site plans (*Two 11" x 17" or larger scaled copies and one 8 ½" x 11" reduction*)
  - Vicinity map clearly showing the location of the property.
  - Critical areas map showing all critical areas, required buffers, and existing topography based on City or surveyed data.
  - Site plan detailing the development proposal (including stormwater facilities) and the limits of construction. This map should be overlaid on the critical area/topographical map.
  - Topography map showing the location and extent of all grading, cut and fill, and post construction contours.
- ▣ The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
- ▣ Identification and characterization of all critical areas, water bodies, and buffers adjacent to the proposed project area;
- ▣ A statement specifying the accuracy of the report, and all assumptions made and relied upon;
- ▣ An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;
- ▣ An analysis of site development alternatives including a no development alternative;
- ▣ A description of reasonable efforts made to apply mitigation sequencing pursuant to *Mitigation Sequencing* [Section 16.55.250] to avoid, minimize, and mitigate impacts to critical areas;
- ▣ Plans for adequate mitigation to offset any impacts, in accordance with *Mitigation Plan Requirements* (BMC 16.55.260) and additional requirements specified for each critical area.
- ▣ A discussion of the performance standards applicable to the critical area and proposed activity;
- ▣ Financial guarantees to ensure compliance; and
- ▣ Any additional information required for the critical area as specified in the corresponding chapter.

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MITIGATION REPORT REQUIREMENTS

See each Critical Area section for specific mitigation requirements. When mitigation is required, the applicant shall also submit a mitigation plan, prepared by a "qualified professional", as defined in BMC 16.55. The mitigation plan shall include:

- ▣ Detailed summary of the project, including the impacts to the critical area, and the proposed mitigation to compensate for lost functions and values to appear in the beginning of the report.
- ▣ Rationale for selecting the mitigation site.
- ▣ Complete site characterization of the proposed mitigation site to include parcel size, ownership, soils, vegetation, hydrology, topography, and wildlife.
- ▣ Goals, objectives, performance standards and dates of completion of the mitigation proposal.
- ▣ Report and maps of the critical area to be impacted.
- ▣ Monitoring, maintenance, and contingency plan. The monitoring schedule (dates, frequencies and protocols) must be included and a monitoring report submitted accordingly. Monitoring and maintenance shall be required for at least five years unless otherwise stipulated by another government agency.
- ▣ Map of development, with scale, shown in relation to critical area.
- ▣ Financial guarantees ("surety") for 150 percent of the total costs to ensure the mitigation plan is fully implemented, including, but not limited to, the required monitoring and maintenance periods.

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SPECIFIC REPORT REQUIREMENT – WETLANDS AND WETLAND BUFFERS

In addition to the Critical Area Report and associated maps, submit a specific report based on the type of critical area. This supplemental report must also be prepared by a "qualified professional", as defined in BMC 16.55.510. All reports may require additional information as determined by the Planning Director.

A wetland delineation report shall provide an analysis of all wetlands and buffers on site and within one hundred fifty (150) feet of the lot or parcel boundaries including, at a minimum, the following information:

▣ Critical Area Report and Maps (See separate checklist for requirements)

▣ Wetland Delineation Report

- The wetland boundaries shall be surveyed by a licensed surveyor or using an equivalent method with an accuracy of +/- one (1) foot of a survey.
- Determination of each wetland size.
- Description of each wetland class and category.
- Description of overall water sources and drainage patterns on site.
- Description of vegetation, hydrologic conditions, and soil and substrate conditions.
- Description of wildlife and habitat.
- Topographic elevation, at two-foot contours.
- Functional assessment of the wetland and adjacent buffer using a local or state agency-recognized method and including the reference of the method and all data sheets.
- Show the standard buffer requirements for each wetland.

▣ Wetland Mitigation Requirements – provide information described in BMC 16.55.350 in addition to the Mitigation Report Requirements Checklist.

DIAMAND
INFILL TOOLKIT
CONSOLIDATED LAND USE NARRATIVE

I. Subject Site / Properties Information

Address: 4056 Deemer Rd, Bellingham, WA 98226
Tax Parcel Number(s): 380318 195488 0000
Owner: Ben Diamand & Priscillia Hunt
Applicant: AVT Consulting LLC, 1708 F St, Bellingham, WA 98225
Agent(s): Same as applicant

II. Subject Site / Property Description

The subject property is located on Deemer Road, north of Harman Way and South of Woodbury Way in the City of Bellingham, with an address of 4056 Deemer Road (the "Property"). The Property is rectangular in shape and is approximately 1 acre in size. It is located within Section 18, Township 38 North, Range 03 East, W.M. The Property is in the Meridian Neighborhood, Area 20, and is zoned Residential Single, Planned.

The Property is currently developed with a single-family residence with attached garage, associated driveway, and surface parking area. The remainder of the Property is vegetated with maintained lawn and a mixture of ornamental and native trees in rows along the parcel boundaries. There is one wetland on the Property in the southeast corner that extends off site to the east, and one additional offsite wetland to the south. Buffers from these wetlands are 80' and extend over the south and east portions of the Property. The Property is generally flat with a slight slope from the northeast corner down to the southwest corner. There is a short rock retaining wall along the southern portion of the property frontage along Deemer Rd.

The Property abuts the Deemer Rd right of way, which is fully improved with asphalt and concrete travel lanes, bike lanes, sidewalks, curbs, and gutters on both sides. There are water mains, sewer mains and stormwater mains located in Deemer Rd abutting the Property.

Neighboring properties to the north are developed with single family residential uses and a City Fire Station. Neighboring properties to the east are undeveloped. Neighboring properties to the south and west are developed with single family and multifamily residential uses.

III. Project Description

The proposed project includes the development of 7 new Infill Toolkit (ITK) housing units, 3 new attached Accessory Dwelling Units (ADU's), as well as retention of the existing single-family residence on the site. 4 of the new ITK units will be Townhouses and 3 of the new ITK units will be Small Lot units. The attached ADU's are attached to the Small Lot units. A subdivision is proposed so that each unit (8) will be situated on a fee simple lot. A common

tract covering private road and utility infrastructure will be included in the subdivision. The zoning permits a density bonus through the use of the PDR program; the applicant intends to purchase the additional density needed for the site (4 units) through the watershed contribution option.

The existing driveway serving the existing SFR will be removed, and a new shared driveway will be installed at the northwest corner of the site (to align with the intersection of E Bellis Fair Parkway). This driveway will extend along the north property line and then will turn right (south) and extend through the site to provide access to all 8 units and the 3 ADU's. The 4 townhouse units will be located on the east side of this driveway, with garage access to the shared driveway, and frontage on a common pedestrian corridor on the east side of the units. The 3 small lot units will be located on the west side of this driveway, fronting Deemer Road. The 3 ADU's will be located upstairs (on the 2nd story) of the Small Lot units, also with orientation to Deemer Road. The existing SFR will also front on the east side of this driveway. This driveway will serve as a fire turnaround. The driveway is proposed at a 20' total width with 16' of asphalt drive lane and a 4' flush sidewalk along the east side. Along the west side of the driveway there will be 7 surface parking stalls serving the Small Lot units and ADU's. Pedestrian sidewalk will be located on the west side of this surface parking, with connections to each ADU entry, each small lot entry, and through connection to Deemer Road. The pedestrian sidewalk on the east side of the driveway will extend to Deemer Road, as well as to all townhouse garage entries, and to a common pedestrian corridor extending between the southern townhouse and existing SFR, and then running north along the east side of the townhouses to each unit front entry. Each proposed ITK unit fronts and is oriented to either a street (Deemer Road) or a common pedestrian corridor.

The 4 townhouse units fronting the common pedestrian corridor will have front porches facing east towards the onsite open space/critical areas buffers, with provide front porches and private fenced front yards. Two car garage doors for these units will be facing the internal driveway. These units will be setback from the driveway at varying depths, with 3 units having less than 10' of driveway, and 1 unit having greater than 18' of driveway. The 3 small lot units on the west side of the driveway will have front porches facing Deemer Road with private front yards. Each unit will have 1 surface parking stall allocated to the unit, located directly behind it, off the driveway. Each ADU will be situated above the small lot unit, with a private stair that extends from the rear of the unit in the side yard to a covered front porch, oriented to Deemer Road. Each ADU will also have 1 surface parking stall allocated to the unit, located directly behind it, off the driveway. The internal driveway is not proposed as a lane pursuant to Infill Toolkit standards; frontage for the townhouses will be achieved along a common pedestrian corridor and for the small lot units along Deemer Road.

Garbage totes will be kept in each unit garage and will be moved to common garbage pads near Deemer Road on pick up days. Two garbage pads are proposed adjacent to the Deemer sidewalk for placement of these bins, one at the south end of the site, and one along the common driveway entry at the north end of the site. SSC has reviewed and approved this approach to garbage collection and would prefer not to enter the site for collection. The design contemplates limited wetland buffer reductions to accommodate the development. These reduced buffers will be enhanced with vegetation plantings, and the remaining buffer and wetland areas will be placed in a conservation easement and protected with a split rail fence

and signage. The design will also incorporate landscaping along Deemer Road (including 4 new street trees), along the north property line, between garage entries, and around the buildings, porches, and surface parking area.

Water service will be provided to the units from a new public water main extension into the site from Deemer road, in the proposed driveway along the north edge of the Property. Individual services will extend from this new main to serve each unit, with meter banks along the driveway edge. Sewer service will be provided to the units from a new public sewer main extension into the site from the existing sewer main stub at the northwest corner of the Property. Individual services will extend from this new main to serve each unit. Storm water infrastructure will be installed in the driveway and will capture all runoff from roofs and roads and will route this water to a new vault located in the internal driveway. Stormwater will discharge from this vault into a control structure, then a below grade treatment module, and then extend to connect to the existing public storm water infrastructure in Deemer Road. No frontage improvements to Deemer Road will be necessary except at the new curb cut/entry to the site.

The project is designed to meet all Infill Toolkit standards, including FAR, open space, usable space, height, parking, and other standards. Each townhouse unit will have private useable space in front yards and on private decks. Units along the east side will be larger than 1,000 square feet and will have two car garage parking. Units along the west side will be smaller than 1,000 square feet and will have one car surface parking. The existing SFR has garage parking and driveway parking. The proposed ADU's will utilize surface parking along the driveway.

The townhouse units are each 3 stories in height, designed in a contemporary style with single sloped roofs, fiber-cement panel siding and wood and stone accents. Each unit comprises two modules with both horizontal and vertical modulation, significant vertically oriented glazing, intermediate awnings, and decks with glass surrounds. Front porches are covered, and entry doors include glazing with a tall window next to each door. The small lot units are each 1 story in height, with a 2nd story ADU above. These units are also designed in a contemporary style with roof, siding and window details that match the townhouses. Each small lot and ADU unit will have a front entry facing the street with a covered porch and private patio/deck. A detailed discussion of ITK (BMC 20.28) compliance is provided in Section V of this narrative.

MULTI FAMILY DESIGN STANDARDS

I. SITE DESIGN

A. Orientation

Requirement: *Orient buildings to public streets and open spaces in a way that corresponds to the site's natural features and enhances the character of the street for pedestrians.*

Comments: Each townhouse or small lot unit will be oriented either to Deemer Road or to the open space and wetland buffers on the east side of the Property with a common pedestrian corridor for access. A common driveway will extend between the units facilitating garage access and surface parking that is

screened from the road. Units will have covered front porches and private front yards with pathways connecting front doors to the street or a common pedestrian corridor that extends to the street. Landscaping will frame entries and private yards. The design of the project will enhance the character of the street and will screen "back of house" facilities.

B. Neighborhood Connections

Requirement: *Provide functional pedestrian and vehicular connections to existing neighborhoods.*

Comments: The project will include pedestrian connections from each unit front entry to the adjacent public sidewalk along Deemer Road, which then provides pedestrian connectivity throughout the neighborhood. A single access point for vehicles has been aligned with the intersection of E Bellis Fair Parkway to create the safest connection point to the site.

C. Parking Location and Design

Requirement: *Minimize the impact of parking facilities on the fronting street, sidewalk and neighboring properties by designing and locating parking lots, carports, and garages so that they do not dominate the street front.*

Comments: Parking is predominantly provided in garages or in a surface lot that is located along an internal driveway and is screened from the street. 7 surface parking stalls are proposed along the west side of the driveway, screened by the small lot and ADU units. Parking for the existing SFR will be retained in a garage with some surface parking in front of the garage, also screened from the street by the proposed ITK units.

D. Clearing and Grading

Requirement: *Preserve significant natural features whenever feasible and minimize changes to the natural topography.*

Comments: The proposed project has taken the natural environment into consideration for the overall design and layout of development. The development has been concentrated in the north and west portion of the site to reduce impacts to critical areas buffers and existing mature vegetation. The site is relatively flat and significant

grading and retaining walls will not be necessary for the development of the site.

E. Fences and Walls Adjacent to Streets

Requirement: *When using fences or walls, use designs and materials that will maintain a pedestrian scale along streets or public walkways.*

Comments: No exterior property line fences are proposed. One retaining wall may be necessary along Deemer Road near the southwest corner of the development. If necessary, this wall will be only 2' – 3' in height and extend for only a short distance. Fencing in front yards will be 42" or less to maintain a pedestrian scale. Split rail fencing will be provided along the critical area buffer edge.

F. Open Space and Recreational Area

Requirement: *Locate and design useable space to encourage its use for leisure or recreational activities.*

Comments: Each townhouse unit will have private usable space on 2nd story decks, and in private front yards. Units on the west side of the site, oriented towards Deemer Road will have less privacy on their porches due to their orientation to the street, but will be setback from the property line and will be covered, slightly elevated, and will have landscaping to soften and screen their appearance. Unit porches and yards on the east side of the site will be oriented towards the open space and wetland buffer areas that extend off site to the east. These unit porches and yards will have privacy from the surrounding area. All porches are designed to accommodate furniture for leisure and relaxation.

G. Mailboxes, Site Lighting, Bus Stops

Requirement: *Locate and design functions such as mail boxes and bus stops to promote ease of use and safety. Provide lighting adequate for the function without creating excessive glare or light levels.*

Comments: A mailbox bank will be located along the entry driveway. This location will be off the public street and will allow residents easy access on foot to collect their mail. Downlit lighting will be provided around this mailbox area for safety.

H. Trash and Recycling Storage

Requirement: *Provide adequate screening for trash and recycling facilities associated with multifamily developments.*

Comments: All townhouses will have individual trash and recycling totes that will be contained within their garages or at the back of their units along the surface parking lot. These totes will be brought to Deemer Road for pick up on garbage day. Pedestrian paths are provided on the north and south side of the westerly townhouses so that tenants will have shorter walks with their totes. Concrete pads will be provided behind the sidewalk for these totes.

I. Landscape Design – Overall Project

Requirement: *Provide landscaping that is in scale with the buildings and spaces, and compliments the function of the space.*

Comments: Landscaping in the form of ground cover, shrubs, and trees is proposed around all boundaries of the development, buildings, between garage doors, in the townhouse front yards, and along the street edge (street trees). Buffer mitigation plantings, a split rail fence and NGPE signage along the buffer edge will enhance the remaining open space areas. The scale of landscaping will be in character with the proposed development.

J. Landscape Design – Parking Areas

Requirement: *Use landscaping to help define, break up, and screen parking areas.*

Comments: Parking will be located in garages or in a surface lot along the common driveway. Garage parking will be separated by landscape islands between each unit. There will be landscaping along the north and south sides of the shared access driveway and around the surface parking lot.

K. Signs

Requirement: *Minimize the amount of signage needed to identify the multifamily development.*

Comments: There is no proposed common signage.

L. Sidewalk Design

Requirement: *Design sidewalks to be consistent with the existing or proposed street design for the subject area.*

Comments: Interior sidewalks will be installed in concrete and will connect to the sidewalk along Deemer Road.

M. Site Drainage

Requirement: *When open storm water facilities are proposed to be located on the site, minimize negative impacts on natural site features and incorporate them into the overall landscape scheme.*

Comments: No open storm water facilities are proposed.

II. BUILDING DESIGN

A. Neighborhood Scale

Requirement: *The scale of those portions of the building facing an existing developed neighborhood shall conform to the scale established in the neighborhood or the scale identified for the district.*

Comments: The scale of the neighborhood is mixed. Surrounding properties are developed with a mix of one- and two-story single-family residences, two- and three-story townhouses and three- and four-story multifamily apartments. The existing house on the Property is two-stories and there are several surrounding residential structures that are three-stories in height. The proposed townhouses are also three-stories in height. The block of townhouses contains only 4 total units and is consistent in size and mass with many surrounding residential townhouses and multifamily structures. The small lot units with ADU's are only 2 stories in height, fronting along Deemer Road. This design will allow the larger massing to be screened from the public street and for a transition in scale that is appropriate. The project is generally in scale with the neighborhood and the surrounding development.

B. Neighborhood Compatibility

Requirement: *New buildings should reflect some of the architectural character of surrounding buildings when locating in a neighborhood where the existing context is well defined.*

Comments: This area of the Meridian Neighborhood does not

have a uniform or well-defined character. Many buildings in the area are designed in a traditional northwest style with pitched asphalt shingle roofs and lap siding, but there are also several more contemporary designs, including two townhouse projects approximately one block north on Deemer Road. The proposed buildings are contemporary in design, but have modulation, window design and siding material, with wood and stone accents, all of which are similar to those used in the surrounding structures.

C. Privacy

Requirement: *Orient buildings to provide for privacy, to the extent practical, both within the project and for adjacent residential uses.*

Comments: The site design orients buildings for maximum privacy considering that three small lot units front on Deemer Road. As noted above, these units will have design features and landscaping that will help to promote privacy to the greatest extent feasible. The townhouses on the east side of the site, facing the open space, are oriented for maximum privacy. The entire project will have privacy from adjacent uses to the north and south due to the location of the structures on the Property and the proposed access design and landscaping.

D. Façade and Articulation

Requirement: *Use architectural features that break up blank, flat walls and roofs and give the building a human scale.*

Comments: The townhouses incorporate architectural features such as façade modulation, roof articulation, siding material changes, recessed decks, window placement and others that break up blank, flat walls and roofs. The units have a human scale.

E. Windows

Requirement: *Provide articulation of the building facade by using well-proportioned and spaced windows.*

Comments: The window to wall ratio along each of the buildings is appropriate. Window spacing and sizing is similar to and consistent with those used in the other residential developments in the area. Windows are proportioned vertically and are divided or paired where appropriate. Significant glazing is proposed, including along decks and in and around front entry doors.

F. Building Foundations

Requirement: *Design a building foundation to blend visually with the site.*

Comments: The buildings will have limited exposed foundations and where foundations are exposed landscaping will be used to screen them.

G. Entries

Requirement: *Clearly define the main entrance of a building, orient it to a pedestrian walkway and enhance safety through lighting and visibility.*

Comments: Each unit will have a covered and clearly defined front porch entry. All units will have individual walkways connecting front entries directly to Deemer Road or to a common pedestrian corridor that leads to Deemer Road. All pathways and entries will be well-lit with down-shielded lighting.

H. Building Materials

Requirement: *Use durable exterior finish materials that provide visual detail, reduce the perceived scale of the building through texture or pattern and appear similar to those used in the neighborhood.*

Comments: The buildings will include durable exterior finish materials with varying detail. Fiber-cement siding is proposed as well as wood and stone accents on alternating modules. Building colors will vary by module while maintaining a consistent color theme throughout the project.

I. Garages and Accessory Buildings

Requirement: *Design garages and carports in a way that does not dominate the streetscape or obscure building entries. Accessory buildings shall be subordinate in scale to the main buildings.*

Comments: All garages will be accessed from the shared internal access driveway. No garage doors will be visible from the street. Landscaping will be provided between garage doors along the driveway to break up the "rows" of doors.

J. Additions to Existing Structures or Sites with Existing Buildings

Requirement: *When retaining existing structures, incorporate them into a project in a way that preserves their integrity and contributes to a desirable neighborhood character.*

Comments: The existing house on the site will be retained. No significant changes are proposed to the house, and the internal shared driveway has been designed to provide access to the existing attached garage without any changes in maneuvering or orientation. The house effectively fits seamlessly into the new site design.

INFILL TOOLKIT DESIGN STANDARDS

The proposed project includes the development of Infill Toolkit (ITK) small lot and townhouse style units. Therefore, the project is required to meet the general development standards in BMC 20.28.050 and the small lot and townhouse development standards in BMC 20.28.070 and .140 respectively. The project will comply with all the applicable standards and no modifications are requested.

The design of the project prioritizes units fronting on the street (Deemer) or where units can't front on the street, fronting on a common pedestrian corridor, with orientation to open space. The design screens parking in garages and does not locate any parking between dwelling units and the street or lane (for ITK purposes, the internal driveway is not a lane and units should not be required to meet the lane standards, because each unit fronts on a street or common pedestrian corridor instead). As a result, driveway width requirements contained in BMC 20.28.050.A.4 should not be applicable. No parking is located off a street or lane; however, the driveway design incorporates design components from the ITK standards, including pedestrian facilities, placing landscape islands between unit garage entries and limiting driveway space to less than 10' of depth or greater than 18' of depth.

The project meets density and lot requirement regulations and all subdivision regulations contained in the ITK standards. Common facilities and common walls for the townhouses will be addressed with a set of Covenants for the project, which will be finalized after preliminary plat approval.

Each unit fronts on a street or common pedestrian corridor, and although there is no lane on the site (resulting in lane related standards being not applicable), the internal driveway is designed similarly to a large lane from the ITK, with a 20' total width and a flush sidewalk along one side in a different material. The proposed driveway serves only 8 units (plus 3 ADU's). Sidewalk is not included on the west side because these units access their front entries from Deemer Road, however pedestrian facilities are provided behind the surface parking that connects to this driveway. The common pedestrian corridor serving the townhouses extends between the existing SFR garage and the south townhouse. The corridor includes a 3' sidewalk and landscaping either side; this sidewalk is separated from private unit front yards by a 2' landscape strip and is in a minimum 10' corridor.

All townhouse units are larger than 1,000 square feet and provide a minimum of 2 parking stalls in a garage meeting all dimensional requirements. All small lot units are smaller than 1,000 square feet and provide 1 surface parking stall. 4 additional surface stalls are provided, one for each ADU, and one guest stall (it should be noted that the ADU's do not require parking per code due to their proximity to a 15-minute GoLine). All parking meets maneuvering requirements. Landscaping is provided along the street frontages, around units, in open space areas and between garage entries. No fencing over 42" inches is proposed within the project.

All small lot units meet minimum lot size requirements, setbacks, FAR (each unit is less than 1,200 square feet in size, ADU's are exempt), and height (units are less than 25' in height). The project includes in excess of 40% open space and a green factor of .4. Each small lot unit has a covered front porch greater than 40 square feet in size with dimensions of at least 5'. All entries face the public street.

All townhouse units meet setback requirements identified in the townhouse standards, there are no more than 8 units attached, the project meets FAR requirements (with an FAR of .56, excluding the small lots and various non ITK components of the project), and all units will meet the 35' height limitation utilizing height definition no. 1. Each unit will have 200+ sq ft of private usable open space in front yards and on private decks. All usable space will be directly accessible from the unit it serves. The project includes in excess of 30% open space and a green factor of .4. Each townhouse unit has a covered front porch greater than 40 square feet in size with dimensions of at least 5'.

The project design will also meet all small lot and townhouse design standards, including those for frontage, unit entry orientation, access, modulation, articulation, window placement and others. The only design standard (and only ITK standard) that is not met outright is related to garbage (BMC 20.28.140.F.6). This standard requires garbage facilities to be consolidated and screened from the public view. For this project, due to the small size of the project and the design of the internal driveway, each unit is proposed to have personal garbage and recycling totes located in their garage or immediately behind their unit, which will be brought to the street edge along Deemer Road on garbage day. The design incorporates pedestrian paths that lead to two concrete pads designed to accommodate these totes adjacent to the sidewalk. SSC currently picks up garbage along Deemer and has approved this approach to collection. This ITK standard permits individual totes if "*the local refuse provider approves*", and as a result no modification from the standards is necessary for this design component.

It should be noted that the existing single-family residence is not proposed to be converted to an ITK Small Lot unit and has been located on a large remainder lot (Lot 8) meeting RS single family development regulations in BMC 20.32 and subdivision regulations in BMC 23.08 for lot size, building envelope, lot coverage, and other standards. No variances or modifications of any standards are proposed for the existing single-family residence. The proposed ADU's are in compliance with ADU regulations in BMC 20.10.036, as discussed in Section VI of this narrative.

VI. Accessory Dwelling Unit

As discussed in the project description in Section III of this narrative, the project includes construction of three ADU's, each attached to a small lot unit. Each ADU will be located on the 2nd story of the small lot unit, with a set of stairs extending from the rear of the structure to an elevated/covered front porch/deck that faces Deemer Road. Each unit will have two bedrooms, one bath, and an open kitchen/dining/living area. Each ADU is approximately 880 square feet in size. ADU's are exempt from FAR when associated with an ITK unit.

Pursuant to BMC 20.10.036(B)(1), the construction of ADU's is permitted on the Property, accessory to the proposed small lot units (each on their own lot), so long as standards and criteria in BMC 20.10.036(B) are met. Below is an inline response to each applicable standard and criteria. ADU's do not require land use permit or design review approval, however due to the units being integrated into an ITK project, they are shown in the project plans and are discussed in this narrative for overall project review/consistency.

BMC 20.10.036(B) Accessory Dwelling Unit Standards

4. Ownership and Occupancy

Comment: Each ADU is intended to be located on the same lot as an ITK small lot unit. The ADU's are located in a SF zone and as a result a covenant will be recorded against title identifying sale restrictions, owner occupancy requirements, maximum occupancy, etc… (until such time that this requirement is removed by full adoption of State ADU regulations, see BMC 20.10.036.B.4.b).

5. Site Requirements

Comment: Only one ADU is proposed on each lot. Each ADU will have a main entrance with direct access to Deemer Road via front stairs connecting to a pedestrian sidewalk that extends to Deemer.

6. ADU Size

Comment: The ADU's will each be approximately 880 square feet in size.

7. Minimum Yards for D-ADUs

Comment: This standard is not applicable to an attached ADU.

8. Building Height for D-ADUs

Comment: This standard is not applicable to an attached ADU, however the ADUs will be located on the 2nd story of each small lot unit, with a total height not exceeding 24'.

9. Parking

Comment: No parking is required for the ADU's due to their proximity to a 15 minute Go Line, however each ADU will have one surface parking stall located along the common immediately behind the unit. Pedestrian connectivity will be provided to each ADU from the adjacent parking.

10. Privacy

Comment: The ADU's have been designed for maximum privacy considering they are attached. Each ADU is located above a small lot unit, with a front porch/deck that has a solid railing and is screened from the street. Each ADU is separated by 12' from adjacent structures. No windows are proposed on the south façade of each ADU/small lot combo so that units will not have windows looking directly into other units. Landscaping will be installed around the ADU's to soften their appearance and provide some screening.

11. Utilities

Comment: Each ADU will have separate utility connections to water, sewer and power in order to facilitate future condominiumization. All necessary shut offs, panels and other utility controls will be accessible to the residents of the ADUs and small lot units without entering a neighboring unit.

12. Compliance with Applicable Codes

Comment: The ADU will be designed and constructed in compliance with all applicable building code requirements.

13. Accessibility

Comment: The ADU unit is not proposed as an accessible unit and no deviations from the stated requirements will be requested.

LEGEND

- = FOUND BRASS MON
- = SET 1/2" REBAR W/ PLASTIC CAP
- = FOUND IRON PIPE
- = FOUND HUB AND TACK
- = EXISTING STORM DRAIN CATCH BASIN (TYPE I)
- = EXISTING STORM DRAIN CATCH BASIN (TYPE 2)
- = EXISTING STORM DRAIN MANHOLE (TYPE 2) (SOLID LID)
- = PROPOSED RAINLEADER/DOWNSPOUT
- = PROPOSED AREA DRAIN
- = PROPOSED STORM DRAIN SERVICE
- = PROPOSED STORM DRAIN CLEANOUT
- = PROPOSED STORM DRAIN CATCH BASIN
- = PROPOSED STORM DRAIN MANHOLE (TYPE 2)
- = EXISTING SANITARY SEWER MANHOLE
- = EXISTING SANITARY SEWER CLEANOUT
- = PROPOSED SEWER CLEANOUT
- = PROPOSED SEWER MANHOLE
- = EXISTING WATER METER BOX
- = EXISTING FIRE HYDRANT
- = EXISTING WATER VALVE
- = PROPOSED WATER METER BOX
- = PROPOSED WATER BLOW-OFF
- = EXISTING POWER/AND OR UTILITY POLE
- = EXISTING GUY POLE
- = EXISTING POWER METER/STRUCTURE
- = EXISTING POWER VAULT
- = EXISTING TV BOX
- = EXISTING LANDSCAPING

- = EXISTING OVERHEAD ELECTRIC LINES
- = EXISTING UNDERGROUND POWER
- = EXISTING OVERHEAD PHONE
- = EXISTING UNDERGROUND PHONE
- = EXISTING UNDERGROUND TV CABLE
- = EXISTING GAS MAIN
- = EXISTING WATER LINE
- = PROPOSED WATER LINE
- = EXISTING SANITARY SEWER LINE
- = PROPOSED SANITARY SEWER LINE
- = PROPOSED SANITARY SEWER FORCE LINE
- = EXISTING FLOW LINE & DIRECTION
- = EXISTING STORM DRAIN LINE
- = PROPOSED STORM DRAIN LINE (SOLID WALL)
- = PROPOSED STORM DRAIN LINE (PERFORATED)
- = PROPOSED FOUNDATION DRAIN
- = PROPOSED ROOF DRAIN
- = EXISTING FENCE
- = EXISTING TOP OF BANK
- = EXISTING TOE OF BANK
- = EXISTING CONTOUR (INDEX)
- = EXISTING CONTOUR (NORMAL)

- = PROPOSED ASPHALT PAVEMENT
- = PROPOSED CONCRETE

SHEET INDEX

VICINITY MAP

CONTACT INFORMATION

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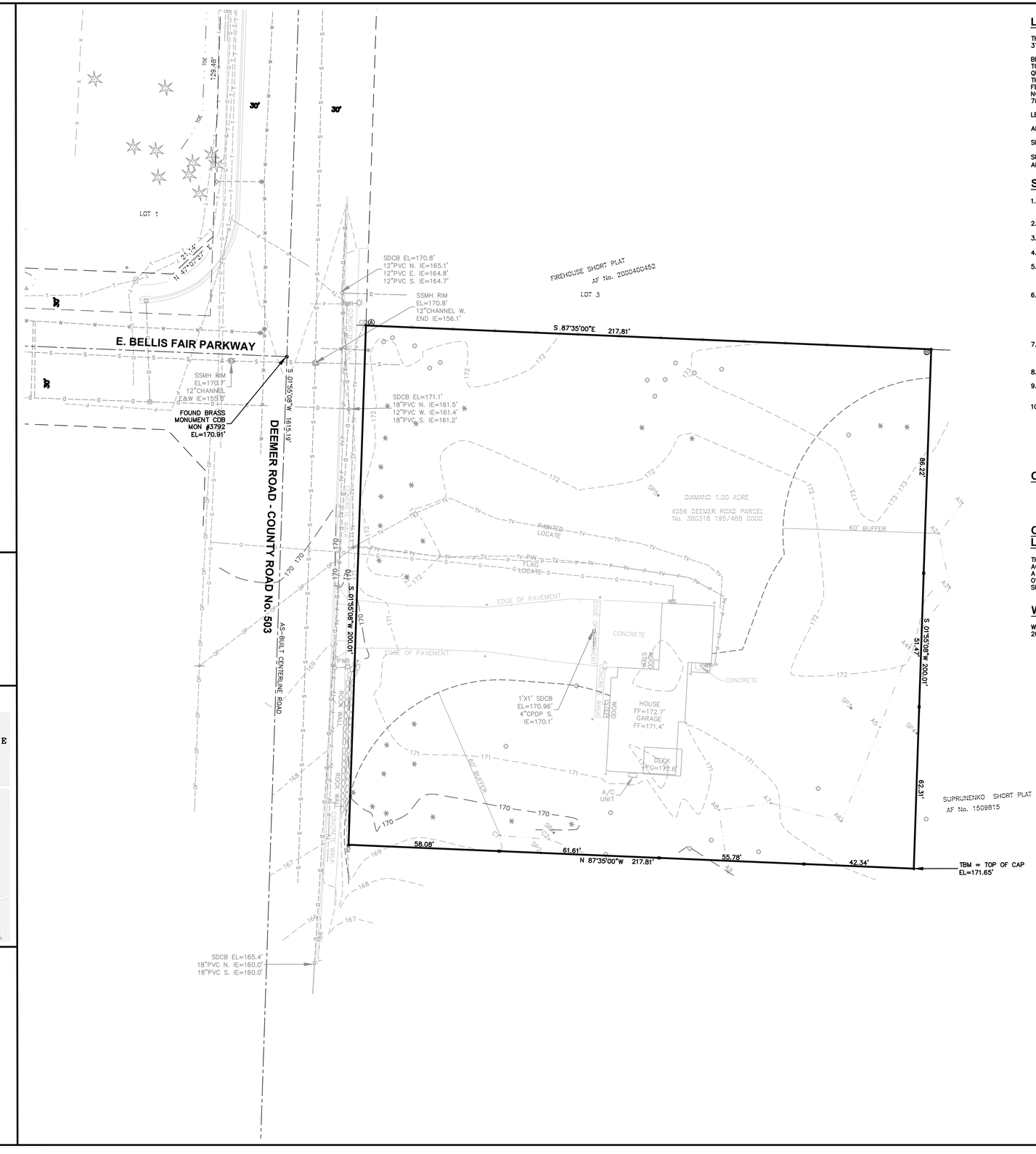


LAND DESCRIPTION:

THE SOUTH 200 FEET OF THE WEST 120 FEET AND THE SOUTH 200 FEET OF THE WEST 372 FEET OF THE EAST 662 FEET OF THE FOLLOWING DESCRIBED TRACT:

BEGINNING AT A POINT ON THE NORTH AND SOUTH CENTER LINE OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 3 EAST OF W.M., 566.18 FEET DUE SOUTH FROM THE QUARTER SECTION CORNER ON THE NORTH SIDE OF SAID SECTION 18; AND RUNNING THENCE SOUTH ALONG THE NORTH AND SOUTH CENTER LINE OF SAID SECTION 18, 288 FEET; THENCE WEST 782 FEET PARALLEL TO THE NORTH LINE OF SAID SECTION; THENCE NORTH PARALLEL TO THE SAID CENTER LINE OF SAID SECTION 288 FEET; THENCE EAST 782 FEET OT THE PLACE OF BEGINNING;

LESS ROADS;

AND EXCEPT THE EAST 274.20 FEET THEREOF.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SUBJECT TO AND/OR TOGETHER WITH ALL EASEMENTS, COVENANTS, RESTRICTIONS AND/OR AGREEMENTS OF RECORD, OR OTHERWISE.

SURVEYORS NOTES:

1. "○" DENOTES 5/8 INCH REBAR WITH 1 INCH PLASTIC CAP MARKED "NWS & GPS 49276 & 50982" SET BY THIS SURVEY.
2. "●" DENOTES REBAR AND CAP MARKED "STEELE LS.13138" FOUND BY THIS SURVEY.
3. "□" DENOTES HUB AND LATH SET FOR POINTS ON LINE BY THIS SURVEY.
4. "✳" DENOTES CALCULATED POSITION ONLY.
5. THIS SURVEY WAS PERFORMED BY STANDARD FIELD TRAVERSE USING A GEOMAX ZOOM90 TOTAL STATION WITH A CARLSON SURVEYOR 2 COLLECTOR/FIELD COMPUTER IN NOVEMBER OF 2021 ACCURACY EXCEEDS 1:10000.
6. THIS SURVEY TIED INTO CONTROL POINTS FROM OUR PREVIOUS WORK WITHIN THE AREA, ROAD MONUMENTATION AND LOT CORNERS AS SHOWN AND RELIED UPON CITY OF BELLINGHAM 2005 HORIZONTAL CONTROL NETWORK RECORD OF SURVEY AF No. 2071002449 FOR BASIS OF BEARINGS; MONUMENTED CENTERLINE OF DEEMER ROAD BETWEEN CITY OF BELLINGHAM MONUMENTS #2445 AND #3792 AS BEING S 01°55'08" W.
7. 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.
8. VERTICAL DATUM = NAVD 88
9. CONTOUR INTERVALS ARE 1 FOOT. CONTOURS ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY.
10. NORTHWEST SURVEYING & GPS INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR UTILITIES NOT SHOWN HEREON. UNDERGROUND UTILITIES ARE KNOWN TO EXIST WITHIN THE AREA OF CONSTRUCTION. 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.

OCCUPATION NOTES:

Ⓐ WEST END OF FENCE LIES 0.2' NORTH AND 0.3' EAST OF DEED CORNER.

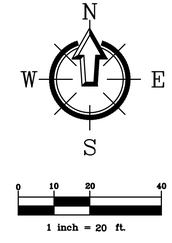
Ⓑ DEED CORNER LIES IN FENCE LINE.

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 POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE OWNERSHIP. THE LEGAL RESOLUTION OF OWNERSHIP BASED UPON UNWRITTEN TITLE CLAIMS HAS NOT BEEN RESOLVED BY THIS SURVEY.

WETLAND NOTE:

WETLANDS DELINEATED BY NORTHWEST ECOLOGICAL SERVICES, L.L.C. IN JANUARY OF 2022 AND LOCATED BY THIS FIRM IN FEBUARY OF 2022.



0 10 20 40

1 inch = 20 ft.

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

FREELAND & ASSOCIATES

REV:	DATE:	DESCRIPTION:	BY:

CLIENT:
BEN DIAMOND
5421 SELMARAINE DRIVE
CULVER CITY, CA 90230

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

PROJECT LOCATION:
4056 DEEMER ROAD
4056 DEEMER ROAD
BELLINGHAM, WA 98226

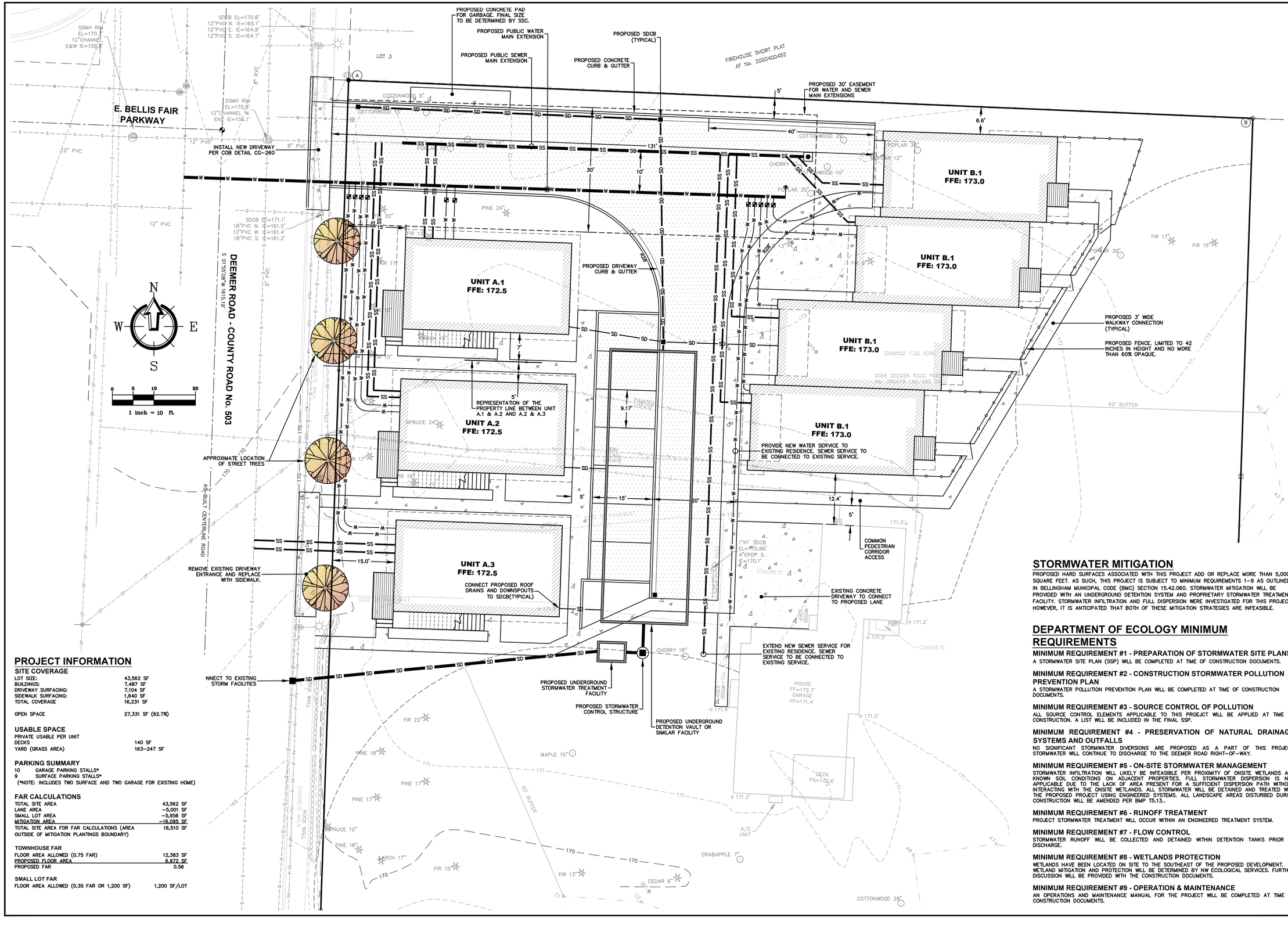
DRAWING #: 22062SP9.DWG
DRAWN BY: GJK
CHECKED BY: JPS
DESIGNED BY: JPS

SHEET CONTENTS:
COVER SHEET & EXISTING CONDITIONS

JEAN-PAUL SLAGLE — STATE OF WASHINGTON — 43224 — REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
1/22/2024

JOB #: 22062
DATE: 1-22-2024

SHEET:
DR1



PROJECT INFORMATION

SITE COVERAGE

LOT SIZE:	43,562 SF
BUILDINGS:	7,487 SF
DRIVEWAY SURFACING:	7,104 SF
SIDEWALK SURFACING:	1,640 SF
TOTAL COVERAGE	16,231 SF
OPEN SPACE	27,331 SF (62.7%)

USABLE SPACE

PRIVATE USABLE PER UNIT	
DECKS	140 SF
YARD (GRASS AREA)	163-247 SF

PARKING SUMMARY

10 GARAGE PARKING STALLS*
9 SURFACE PARKING STALLS*
(*NOTE: INCLUDES TWO SURFACE AND TWO GARAGE FOR EXISTING HOME)

FAR CALCULATIONS

TOTAL SITE AREA	43,562 SF
LANE AREA	-5,001 SF
SMALL LOT AREA	-5,956 SF
MITIGATION AREA	-16,095 SF
TOTAL SITE AREA FOR FAR CALCULATIONS (AREA OUTSIDE OF MITIGATION PLANTINGS BOUNDARY)	16,510 SF

TOWNHOUSE FAR

FLOOR AREA ALLOWED (0.75 FAR)	12,383 SF
PROPOSED FLOOR AREA	6,972 SF
PROPOSED FAR	0.56

SMALL LOT FAR

FLOOR AREA ALLOWED (0.35 FAR OR 1,200 SF)	1,200 SF/LOT

STORMWATER MITIGATION

PROPOSED HARD SURFACES ASSOCIATED WITH THIS PROJECT ADD OR REPLACE MORE THAN 5,000 SQUARE FEET. AS SUCH, THIS PROJECT IS SUBJECT TO MINIMUM REQUIREMENTS 1-9 AS OUTLINED IN BELLINGHAM MUNICIPAL CODE (BMC) SECTION 15.42.060. STORMWATER MITIGATION WILL BE PROVIDED WITH AN UNDERGROUND DETENTION SYSTEM AND PROPRIETARY STORMWATER TREATMENT FACILITY. STORMWATER INFILTRATION AND FULL DISPERSION WERE INVESTIGATED FOR THIS PROJECT; HOWEVER, IT IS ANTICIPATED THAT BOTH OF THESE MITIGATION STRATEGIES ARE INFEASIBLE.

DEPARTMENT OF ECOLOGY MINIMUM REQUIREMENTS

MINIMUM REQUIREMENT #1 - PREPARATION OF STORMWATER SITE PLANS
A STORMWATER SITE PLAN (SSP) WILL BE COMPLETED AT TIME OF CONSTRUCTION DOCUMENTS.

MINIMUM REQUIREMENT #2 - CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN
A STORMWATER POLLUTION PREVENTION PLAN WILL BE COMPLETED AT TIME OF CONSTRUCTION DOCUMENTS.

MINIMUM REQUIREMENT #3 - SOURCE CONTROL OF POLLUTION
ALL SOURCE CONTROL ELEMENTS APPLICABLE TO THIS PROEJCT WILL BE APPLIED AT TIME OF CONSTRUCTION. A LIST WILL BE INCLUDED IN THE FINAL SSP.

MINIMUM REQUIREMENT #4 - PRESERVATION OF NATURAL DRAINAGE SYSTEMS AND OUTFALLS
NO SIGNIFICANT STORMWATER DIVERSIONS ARE PROPOSED AS A PART OF THIS PROJECT. STORMWATER WILL CONTINUE TO DISCHARGE TO THE DEEMER ROAD RIGHT-OF-WAY.

MINIMUM REQUIREMENT #5 - ON-SITE STORMWATER MANAGEMENT
STORMWATER INFILTRATION WILL LIKELY BE INFEASIBLE PER PROXIMITY OF ONSITE WETLANDS AND KNOWN SOIL CONDITIONS ON ADJACENT PROPERTIES. FULL STORMWATER DISPERSION IS NOT APPLICABLE DUE TO THE LACK OF AREA PRESENT FOR A SUFFICIENT DISPERSION PATH WITHOUT INTERACTING WITH THE ONSITE WETLANDS. ALL STORMWATER WILL BE DETAINED AND TREATED WITH THE PROPOSED PROJECT USING ENGINEERED SYSTEMS. ALL LANDSCAPE AREAS DISTURBED DURING CONSTRUCTION WILL BE AMENDED PER BMP T5.13..

MINIMUM REQUIREMENT #6 - RUNOFF TREATMENT
PROJECT STORMWATER TREATMENT WILL OCCUR WITHIN AN ENGINEERED TREATMENT SYSTEM.

MINIMUM REQUIREMENT #7 - FLOW CONTROL
STORMWATER RUNOFF WILL BE COLLECTED AND DETAINED WITHIN DETENTION TANKS PRIOR TO DISCHARGE.

MINIMUM REQUIREMENT #8 - WETLANDS PROTECTION
WETLANDS HAVE BEEN LOCATED ON SITE TO THE SOUTHEAST OF THE PROPOSED DEVELOPMENT. WETLAND MITIGATION AND PROTECTION WILL BE DETERMINED BY NW ECOLOGICAL SERVICES. FURTHER DISCUSSION WILL BE PROVIDED WITH THE CONSTRUCTION DOCUMENTS.

MINIMUM REQUIREMENT #9 - OPERATION & MAINTENANCE
AN OPERATIONS AND MAINTENANCE MANUAL FOR THE PROJECT WILL BE COMPLETED AT TIME OF CONSTRUCTION DOCUMENTS.

220 West Champion Street, Suite 200 t. 360.650.1408
Bellingham, WA 98225 f. 360.650.1401
FREELAND & ASSOCIATES

REV:	DATE:	DESCRIPTION:	BY:

CLIENT:
BEN DIAMOND
5421 SELMARAINE DRIVE
CULVER CITY, CA 90230

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1-800-424-5555

PROJECT LOCATION:
4056 DEEMER ROAD
4056 DEEMER ROAD
BELLINGHAM, WA 98226

DRAWING #: 22062SP9.DWG
DRAWN BY: GJK
CHECKED BY: JPS
DESIGNED BY: JPS

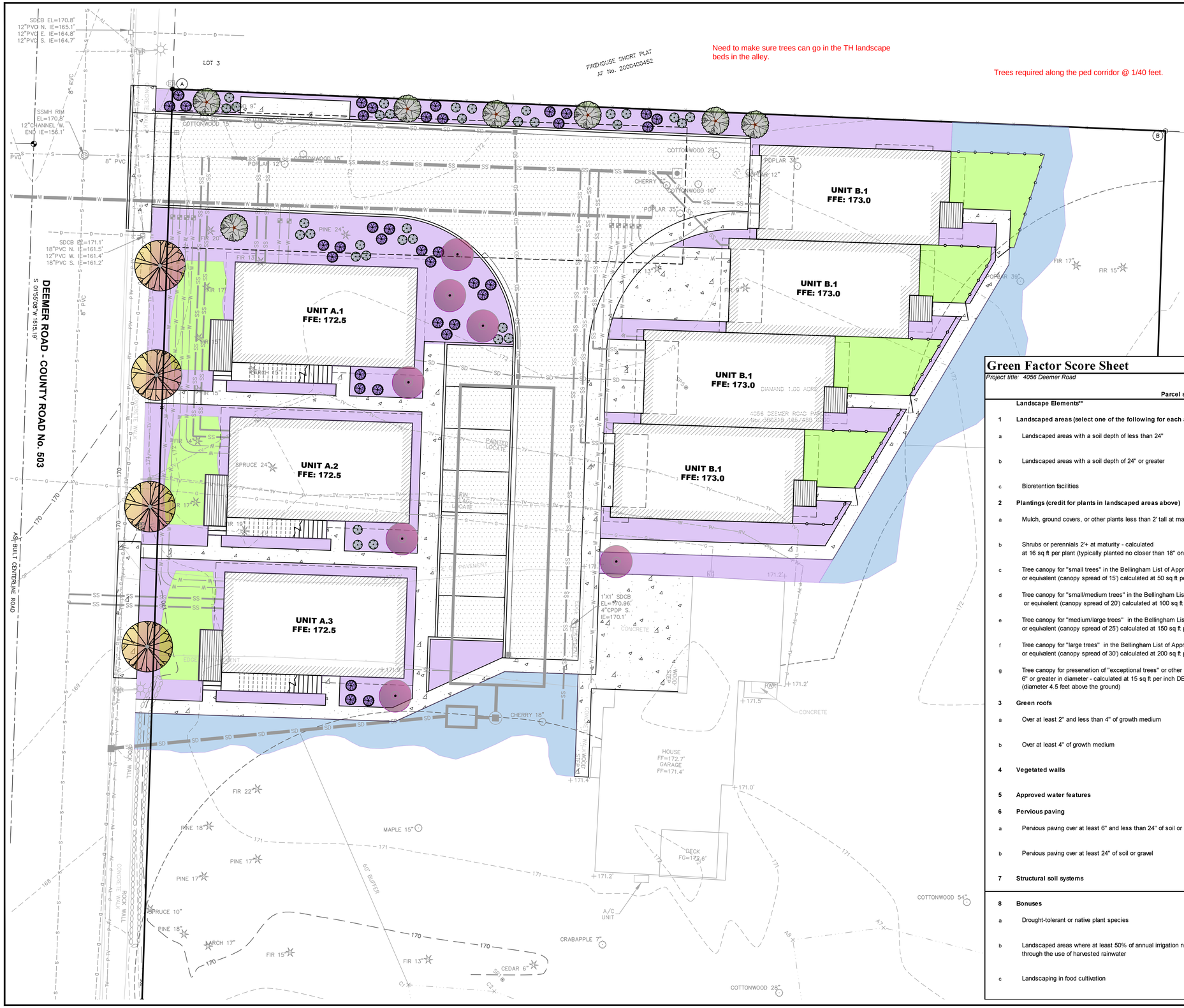
SHEET CONTENTS:
PRELIMINARY SITE PLAN

RANDALL PAUL SALOMAA — STATE OF WASHINGTON — 23224 — REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY 1/22/2024

JOB #: 22062
DATE: 1-22-2024
SHEET: DR2

Need to make sure trees can go in the TH landscape beds in the alley.

Trees required along the ped corridor @ 1/40 feet.



N

W E

S

0 5 10 20

1 inch = 10 ft.

LANDSCAPE LEGEND:

= STREET TREE

= SMALL/MEDIUM DECIDUOUS TREE

= SMALL/MEDIUM DECIDUOUS TREE

= PNW NATIVE GRASS MIX

= EVERGREEN & DECIDUOUS SHRUBS & GRASSES

= TRANSITION TO FROM ORNAMENTAL TO NATIVE PLANTINGS

Green Factor Score Sheet

Project title: *4056 Deemer Road*

enter sq ft of parcel

Parcel size *(enter this value first)* * 22,466

SCORE 0.400

	Landscape Elements**	Totals from GF worksheet	Factor	Total
1	**Landscaped areas (select one of the following for each area)**			
a	Landscaped areas with a soil depth of less than 24"	*enter sq ft* 0	0.1	-
b	Landscaped areas with a soil depth of 24" or greater	*enter sq ft* 7,503	0.8	6,002.4
c	Bioretention facilities	*enter sq ft* 0	1.0	-
2	**Plantings (credit for plants in landscaped areas above)**			
a	Mulch, ground covers, or other plants less than 2' tall at maturity	*enter sq ft* 7,503	0.2	1,501
b	Shrubs or perennials 2'+ at maturity - calculated at 16 sq ft per plant (typically planted no closer than 18" on center)	*enter number of plants* 100 1200	0.3	360
c	Tree canopy for "small trees" in the Bellingham List of Approved Street Trees or equivalent (canopy spread of 15') calculated at 50 sq ft per tree	*enter number of plants* 17 1275	0.3	383
d	Tree canopy for "small/medium trees" in the Bellingham List of Approved Street Trees or equivalent (canopy spread of 20') calculated at 100 sq ft per tree	*enter number of plants* 0 0	0.3	-
e	Tree canopy for "medium/large trees" in the Bellingham List of Approved Street Trees or equivalent (canopy spread of 25') calculated at 150 sq ft per tree	*enter number of plants* 0 0	0.4	-
f	Tree canopy for "large trees" in the Bellingham List of Approved Street Trees or equivalent (canopy spread of 30') calculated at 200 sq ft per tree	*enter number of plants* 0 0	0.5	-
g	Tree canopy for preservation of "exceptional trees" or other large existing trees 6" or greater in diameter - calculated at 15 sq ft per inch DBH (diameter 4.5 feet above the ground)	*enter inches DBH* 0 0	0.8	-
3	**Green roofs**			
a	Over at least 2" and less than 4" of growth medium	*enter sq ft* 0	0.4	-
b	Over at least 4" of growth medium	*enter sq ft* 0	0.7	-
4	**Vegetated walls**	*enter sq ft* 0	0.7	-
5	**Approved water features**	*enter sq ft* 0	0.7	-
6	**Pervious paving**			
a	Pervious paving over at least 6" and less than 24" of soil or gravel	*enter sq ft* 0	0.3	-
b	Pervious paving over at least 24" of soil or gravel	*enter sq ft* 0	0.5	-
7	**Structural soil systems**	*enter sq ft* 0	0.4	-
		sub-total of sq ft = 17,481		
8	**Bonuses**			
a	Drought-tolerant or native plant species	*enter sq ft* 7,503	0.1	750.3
b	Landscaped areas where at least 50% of annual irrigation needs are met through the use of harvested rainwater	*enter sq ft* 0	0.2	-
c	Landscaping in food cultivation	*enter sq ft* 0	0.3	-
		Green Factor numerator =		8,996

220 West Champion Street, Suite 200 t. 360.650.1408
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FREELAND & ASSOCIATES

BY: | DESCRIPTION: | REV: DATE:

CLIENT:
BEN DIAMOND
5421 SELMARAINE DRIVE
CULVER CITY, CA 90230

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PROJECT LOCATION:
4056 DEEMER ROAD
4056 DEEMER ROAD
BELLINGHAM, WA 98226

DRAWN BY: GJK | CHECKED BY: JPS
DRAWING #: 22062SP9.DWG | DESIGNED BY: JPS

SHEET CONTENTS:
PRELIMINARY LANDSCAPE PLAN

PAUL SALOMON — STATE OF WASHINGTON — 43224 — REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
1/22/2024

JOB #: 22062 | DATE: 1-22-2024

SHEET: DR3

E. BELLIS FAIR PARKWAY

FOUND BRASS MONUMENT COB MON #3792 EL=170.91'

DEEMER ROAD - COUNTY ROAD No. 503

S87°35'00"E 126.00'

PROPOSED 30' EASEMENT FOR WATER AND SEWER MAIN EXTENSIONS

S87°35'00"E 91.80'

N01°55'08"E 27.49'

LOT 4
2,487 SF
0.06 AC

26.69' S01°55'08"W

11.40' N88°04'52"W

91.80' N88°04'52"W

LOT 5
2,133 SF
0.05 AC

20.67' S01°55'08"W

14.60' N88°04'52"W

103.20' N88°04'52"W

LOT 6
2,435 SF
0.06 AC

20.67' S01°55'08"W

117.80' N88°04'52"W

N88°04'52"W 3.00'

LOT 7
3,244 SF
0.07 AC

26.85' S01°55'08"W

120.80' N88°04'52"W

LOT 8
18,843 SF
0.43 AC

105.13' S01°55'08"W

57.00' N88°04'52"W

N01°55'08"E 34.00'

LOT 1
1,938 SF
0.04 AC

N01°55'08"E 34.00'

COMMON TRACT
8,464 SF
0.19 AC

57.00' N88°04'52"W

N01°55'08"E 34.00'

LOT 2
1,938 SF
0.04 AC

N01°55'08"E 34.00'

57.00' N88°04'52"W

LOT 3
2,080 SF
0.05 AC

N01°55'08"E 36.50'

N01°55'08"E 28.43'

N88°04'52"W 3.87'

11.71' S01°55'08"W

57.00' N88°04'27"W

36.13' N88°04'27"W

N01°55'08"E 63.11'

217.81' N87°35'00"W

TBM = TOP OF CAP
EL=171.65'

N

W E

S

0 5 10 20

1 inch = 10 ft.

220 West Champion Street, Suite 200 t: 360.650.1408
Bellingham, WA 98225 f: 360.650.1401
FREELAND & ASSOCIATES

REV:	DATE:	DESCRIPTION:	BY:

CLIENT:
BEN DIAMOND
5421 SELMARAINE DRIVE
CULVER CITY, CA 90230

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PROJECT LOCATION:
4056 DEEMER ROAD
4056 DEEMER ROAD
BELLINGHAM, WA 98226

DRAWING #: 22062SP9.DWG
DRAWN BY: GJK
CHECKED BY: JPS
DESIGNED BY: JPS

SHEET CONTENTS:
PRELIMINARY PLAT LAYOUT

JEAN-PAUL SALOMEZ
STATE OF WASHINGTON
43224
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
1/22/2024

JOB #: 22062
DATE: 1-22-2024
SHEET: DR4

DEEMER ROAD TOWNHOUSES

4056 DEEMER ROAD, BELLINGHAM, WA 98226

LAND USE - DESIGN REVIEW

ZERVAS

ARCHITECTURAL ABBREVIATIONS

&	AND
AB	AIR BARRIER
ACT	ACOUSTICAL CEILING TILE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
AV	AUDIO / VISUAL
BR&S	BACKER ROD AND SEALANT
BSMT	BASEMENT
BR	BEDROOM
BLKG	BLOCKING
BOT	BOTTOM
BO	BOTTOM OF
BLDG	BUILDING
CPT	CARPET
CT	CERAMIC TILE
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
CI	CONTINUOUS INSULATION
CJ	CONTROL JOINT
DEMO	DEMOLISH OR DEMOLITION
DTL	DETAIL
DIA	DIAMETER
DIM(S)	DIMENSION(S)
DW	DISHWASHER
DN	DOWN
DS	DOWNSPOT
DR	DOOR
DWG	DWG
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION OR ELEVATOR
EQ	EQUAL
(E)	EXISTING
EXIST	EXISTING
EJ	EXPANSION JOINT
EXT	EXTERIOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FC	FIBER CEMENT
FFL	FINISHED FLOOR ELEVATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FACE OR FINISHED FLOOR
FRT	FIRE RETARDANT TREATED
FIN	FINISH
FLR	FLOOR
FD	FLOOR DRAIN
FTG	FOOTING
GALV	GALVANIZED
GA	GAUGE
GC	GENERAL CONTRACTOR
GLB	GLUE LAMINATED BEAM
GWB	GYPSUM WALLBOARD
HM	HOLLOW METAL
HB	HOSE BIB
HR	HOUR
HSS	HOLLOW STEEL SECTION
ILO	IN LIEU OF
INSUL	INSULATION OR INSULATED
ID	INSIDE DIAMETER
INT	INTERIOR
LAV	LAVATORY
LF	LINEAL FEET
MAX	MAXIMUM
MFR	MANUFACTURER
MO	MASONRY OPENING
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEUS
NFVA	NET FREE VENTILATION AREA
(N)	NEW
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OH	OPPOSITE HAND OR OVERHEAD
OTO	OUT TO OUT
OD	OUTSIDE DIAMETER
ORWL	OVERFLOW RAINWATER LEADER
ORD	OVERFLOW ROOF DRAIN
OFCC	OWNER FURNISHED, CONTRACTOR COORDINATED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PNT	PAINT
PERF	PERFORATED
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PT	PRESSURE TREATED
RWL	RAINWATER LEADER
REF	REFERENCE
RCP	REFLECTED CEILING PLAN
REQD	REQUIRED
REV	REVISION
R	RISER
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING
SCHED	SCHEDULE
SAM	SELF-ADHERED MEMBRANE
SHT	SHEET
SIM	SIM
SOG	SLAB ON GRADE
SC	SOLID CORE
SPEC	SPECIFICATION
SQ	SQUARE
SF	SQUARE FEET
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
T&G	TONGUE AND GROOVE
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOJ	TOP OF JOIST
TOP	TOP OF PLYWOOD
TOSOG	TOP OF SLAB ON GRADE
TOS	TOP OF STEEL
TOTS	TOP OF TOPPING SLAB
T	TREAD
TS	TUBE STEEL
TYP	TYP
UNO	UNLESS NOTED OTHERWISE
VB	VAPOR BARRIER
VIF	VERIFY IN FIELD
VG	VERTICAL GRAIN
VCT	VINYL COMPOSITION TILE
WC	WATER CLOSET
WH	WATER HEATER
WRB	WEATHER RESISTIVE BARRIER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WF	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WD	WOOD

PROJECT DESCRIPTION

S 200 FT OF W 120 FT-S 200 FT OF W 372 FT OF E 662 FT OF TR DAF-BEAP ON N-S SEC C/L 566.18 FT DUE S FR 1/4 SEC COR ON N SIDE OF SEC 18-RUN TH S ALG N-S C/L 288 FT-TH W 782 FT PAR TO N SEC LI-TH N PAR TO SD C/L 288 FT-TH E 782 FT TO POB-LESS RDS-EXC E

DEFERRED SUBMITTALS

1. ELECTRICAL PERMIT

OWNER

BEN DIAMAND
PRISCILLIA HUNT

ARCHITECTURAL SYMBOLS

CENTERLINE — ℄

NORTH ARROWS — PLAN NORTH, TRUE NORTH

GRID HEAD — 0

WALL TAG — 1t

FLOOR TAG — 1t

ROOF TAG — X

CEILING TAG — 1t, 1' - 0" A.F.F.

DOOR TAG — 101 (DOOR #), 00 (HARDWARE GROUP)

WINDOW TAG — X

RELITE TAG — X

ROOM TAGS — Room name, 101; Room name, 101, W | S (INTERIOR PLANS)

EXTERIOR CLADDING TAG — XX

INTERIOR MATERIAL TAG — x

EXTERIOR ELEVATION TAG — 22, 22, A8.16, 22, 22

INTERIOR ELEVATION TAG — 22, 22, A8.16, 22, 22

INTERIOR CABINET TAG — X (CASEWORK #), X X X (WIDTH, HEIGHT, DEPTH)

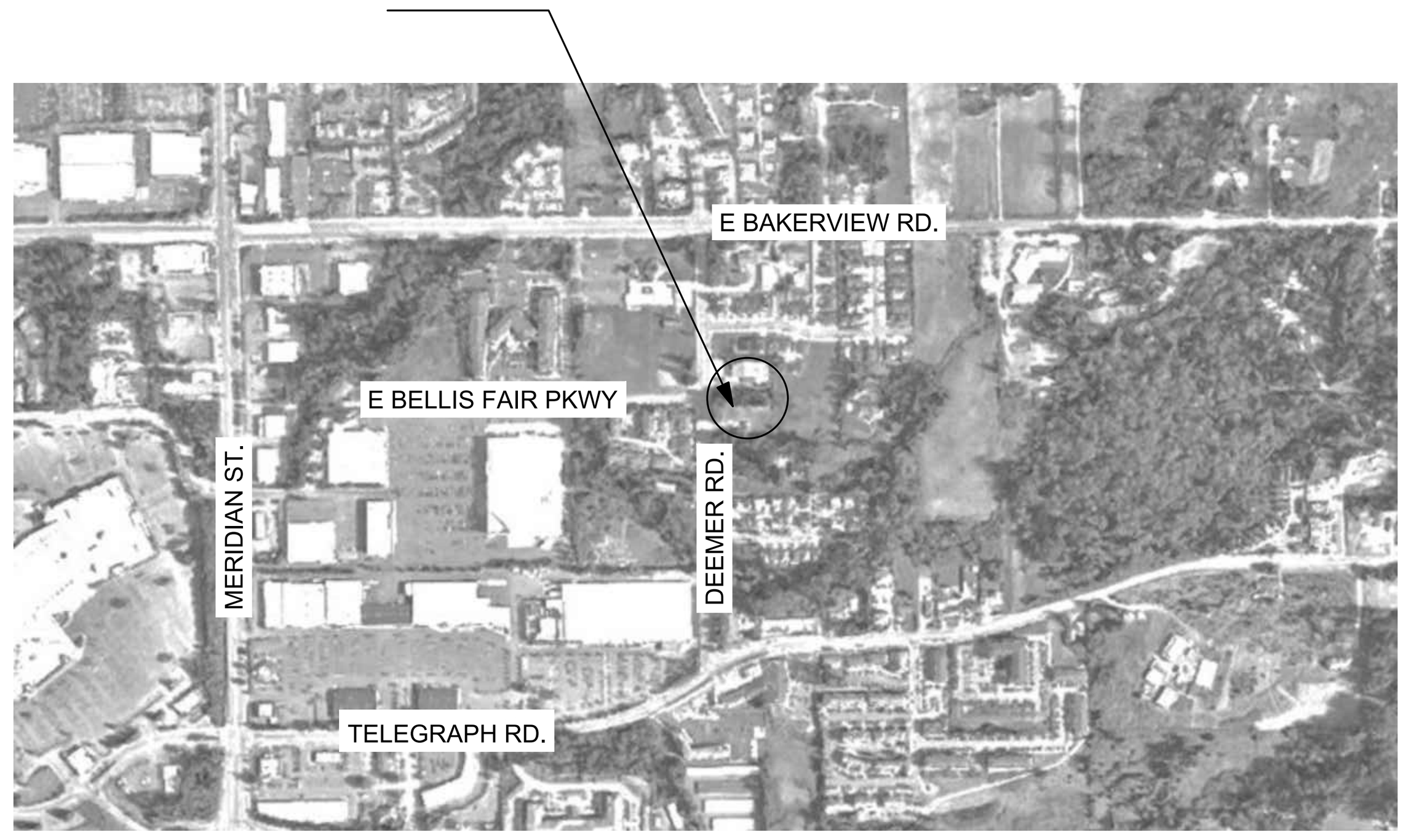
DESIGN TEAM

ARCHITECT :
ZERVAS
209 PROSPECT STREET
BELLINGHAM, WA 98225
PH : 360.734.4744
CONTACT : ANDREW KRZYSIEK

STRUCTURAL ENGINEER:
-
-
-
-
-

CIVIL ENGINEER :
FREELAND & ASSOCIATES
220 WEST CHAMPION STREET
SUITE 200
BELLINGHAM, WA 98225
PH : 360.650.1408
CONTACT : JP SLAGLE

SITE LOCATION



VICINITY MAP

NOT TO SCALE

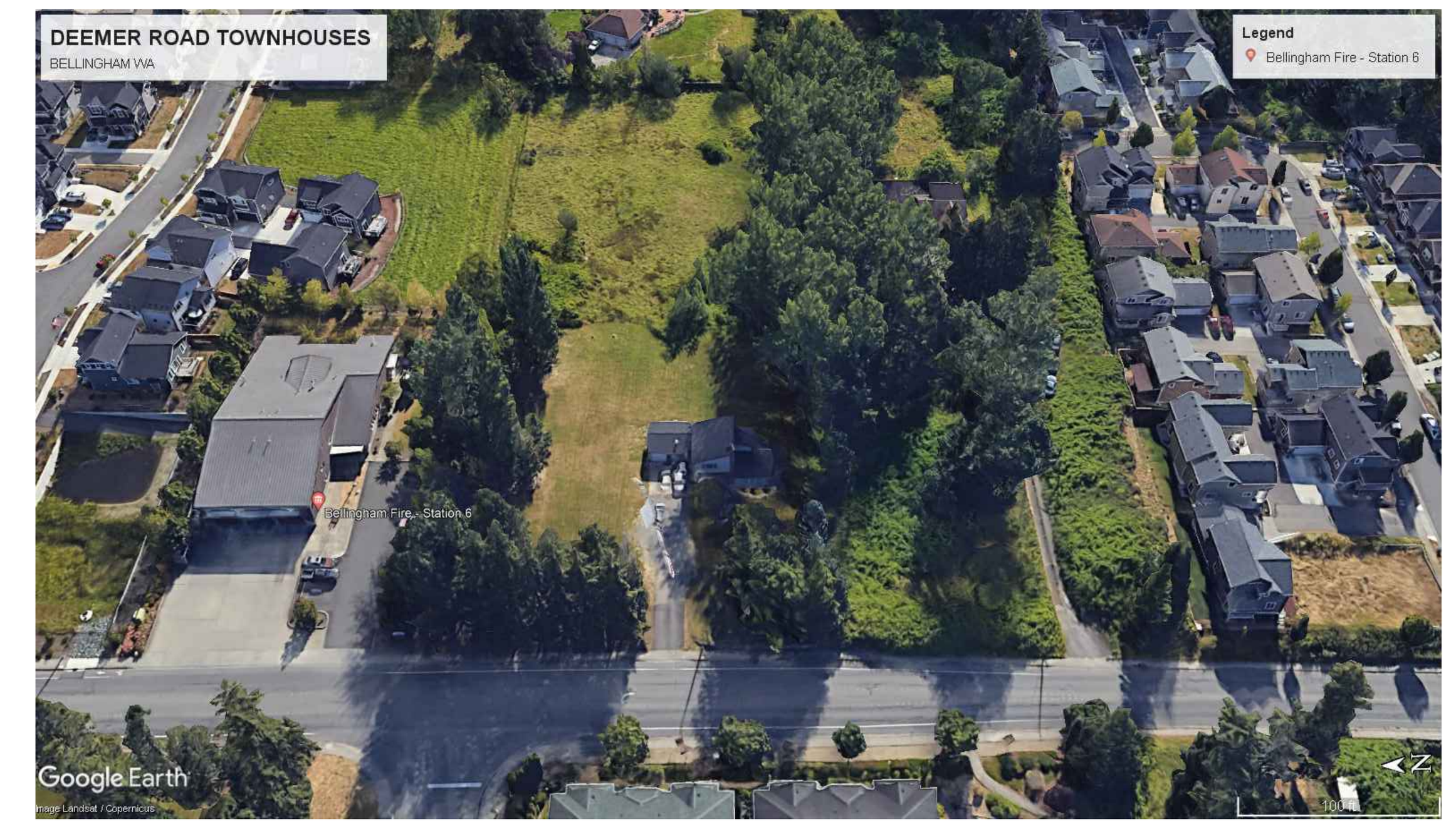
NORTH

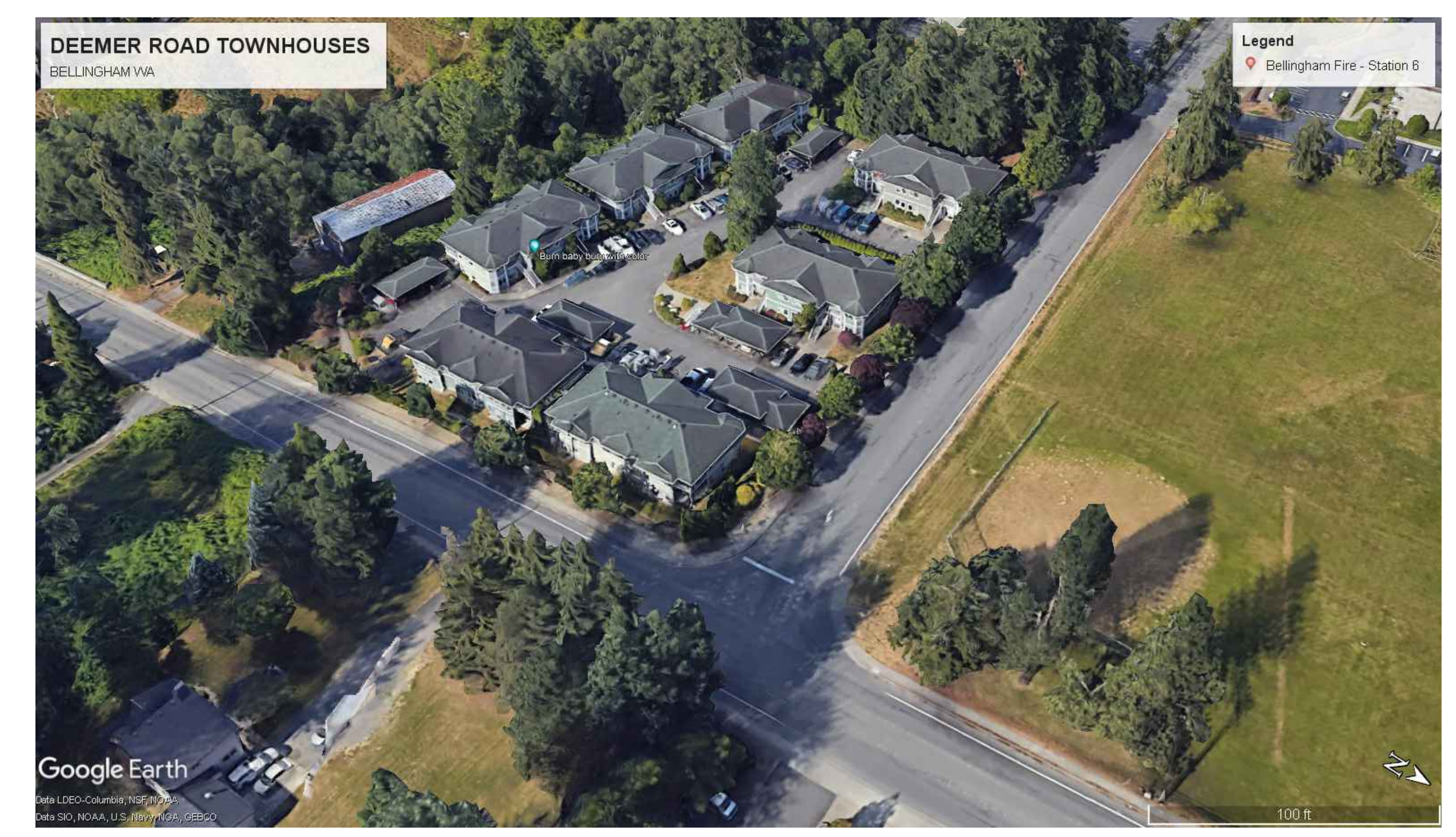
SITE INFORMATION

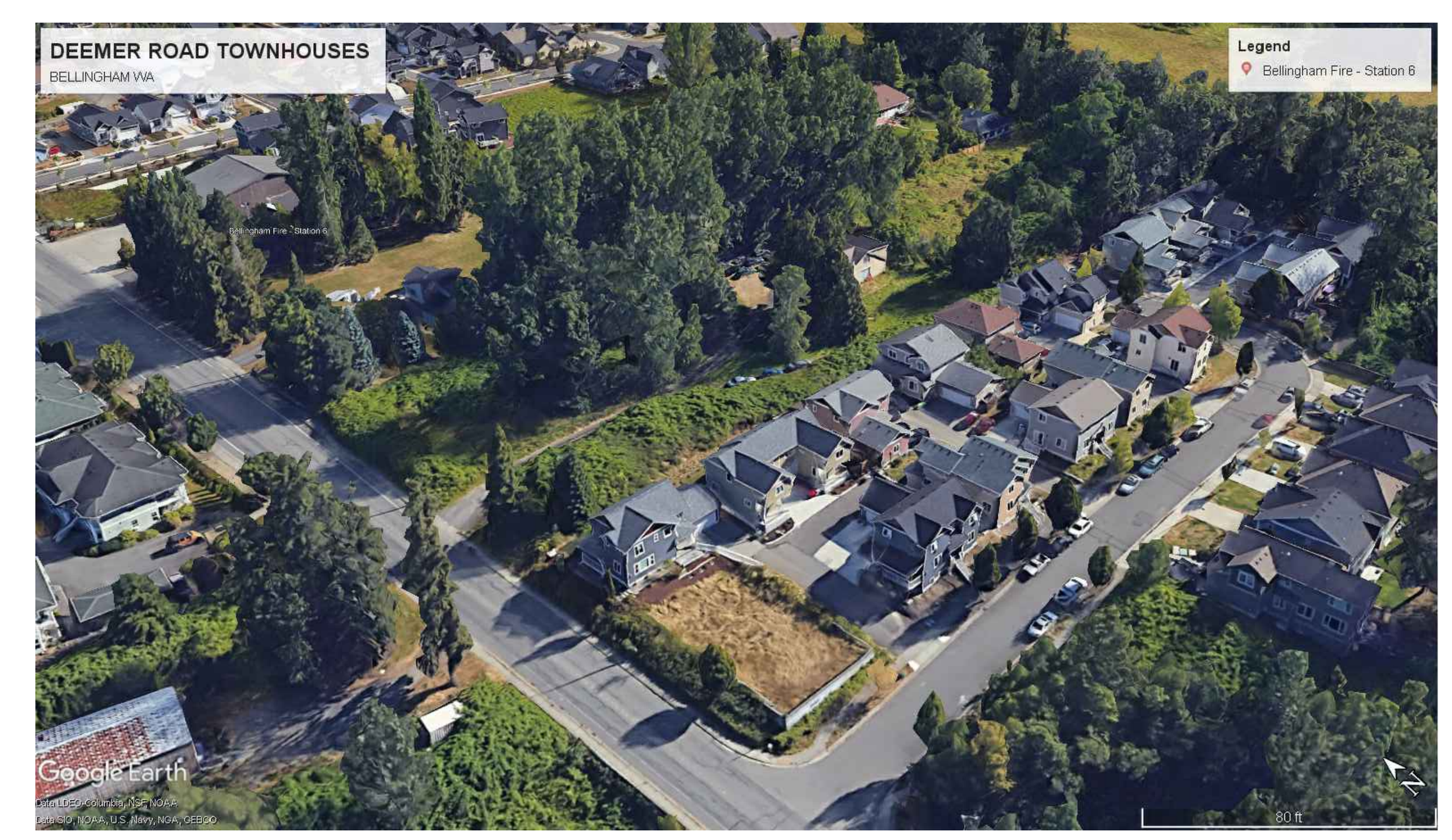
SITE ADDRESS:	4056 DEEMER ROAD, BELLINGHAM, WA 98226
PARCEL #:	3803181954880000
LEGAL DESCRIPTION:	S 200 FT OF W 120 FT-S 200 FT OF W 372 FT OF E 662 FT OF TR DAF-BEAP ON N-S SEC C/L 566.18 FT DUE S FR 1/4 SEC COR ON N SIDE OF SEC 18-RUN TH S ALG N-S C/L 288 FT-TH W 782 FT PAR TO N SEC LI-TH N PAR TO SD C/L 288 FT-TH E 782 FT TO POB-LESS RDS-EXC E
PERMIT #:	-
SQUARE FOOTAGE:	43,560 SF

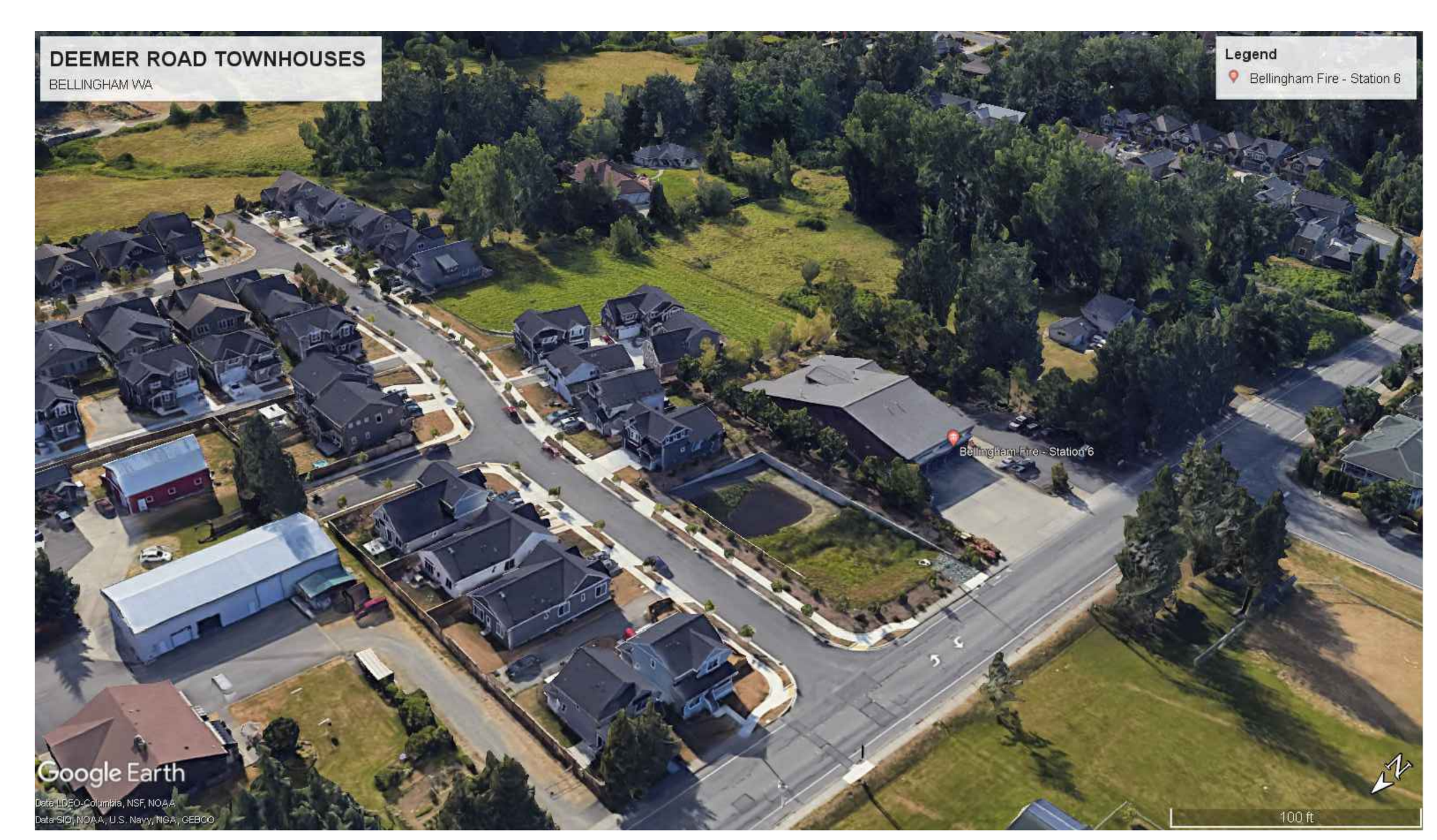
DRAWING INDEX

CONTEXT PHOTOS









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DESIGN REVIEW

REV	ISSUED FOR	DATE

PLAN NORTH — TRUE NORTH

SCALE: 1/8"=1'-0" — 0 — 8'

DEERMER ROAD TOWNHOMES

PROJECT INFORMATION

PROJECT No:	202210.01
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DATE ISSUED:	4/17

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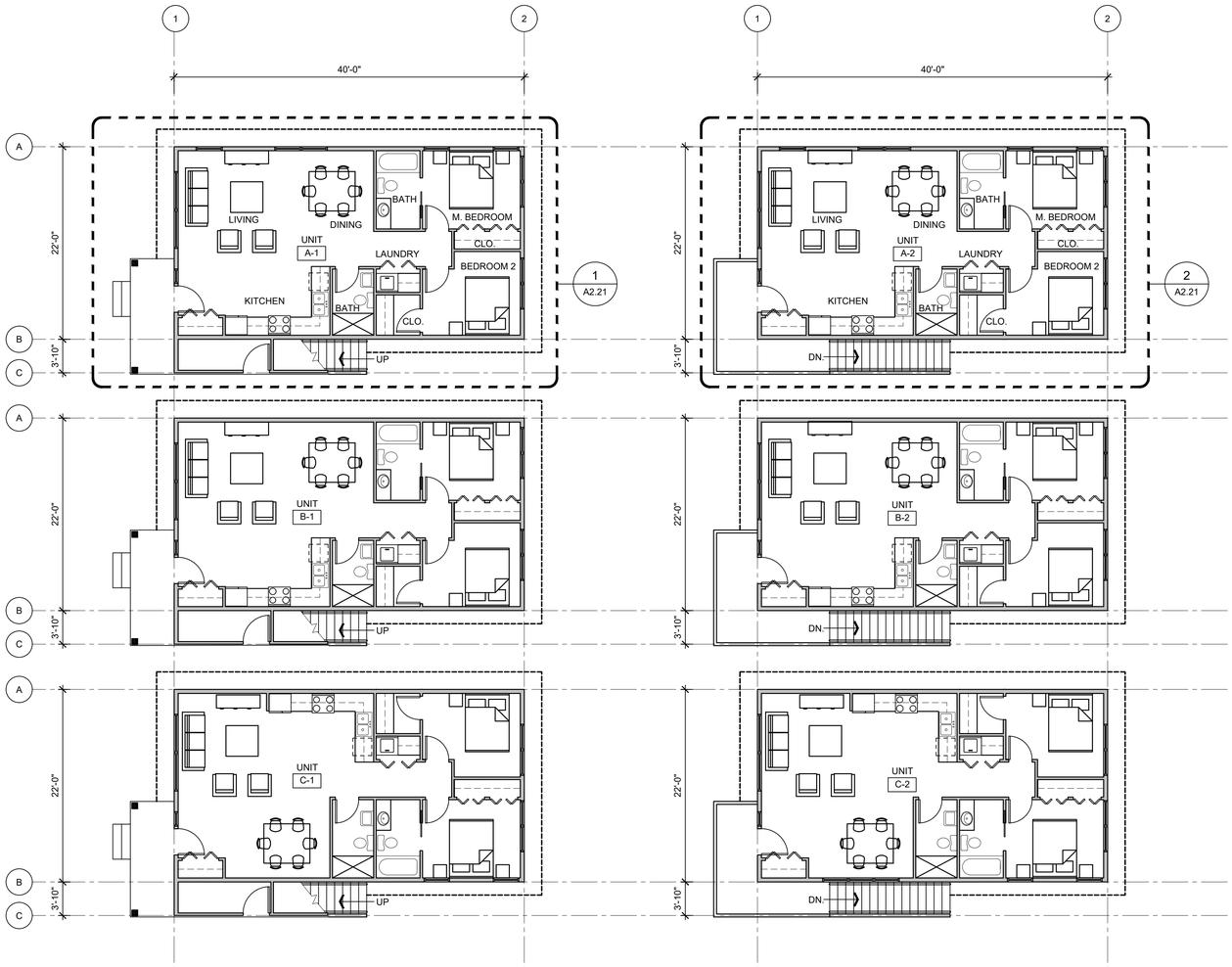

1 LEVEL ONE FLOOR PLAN
1/8" = 1'-0"

2 LEVEL TWO FLOOR PLAN
1/8" = 1'-0"

DESIGN REVIEW

REV	ISSUED FOR	DATE

PLAN NORTH | TRUE NORTH

SCALE: 1/8"=1'-0" 0 8'

DEEMER ROAD TOWNHOMES

ADU BUILDINGS FLOOR PLANS

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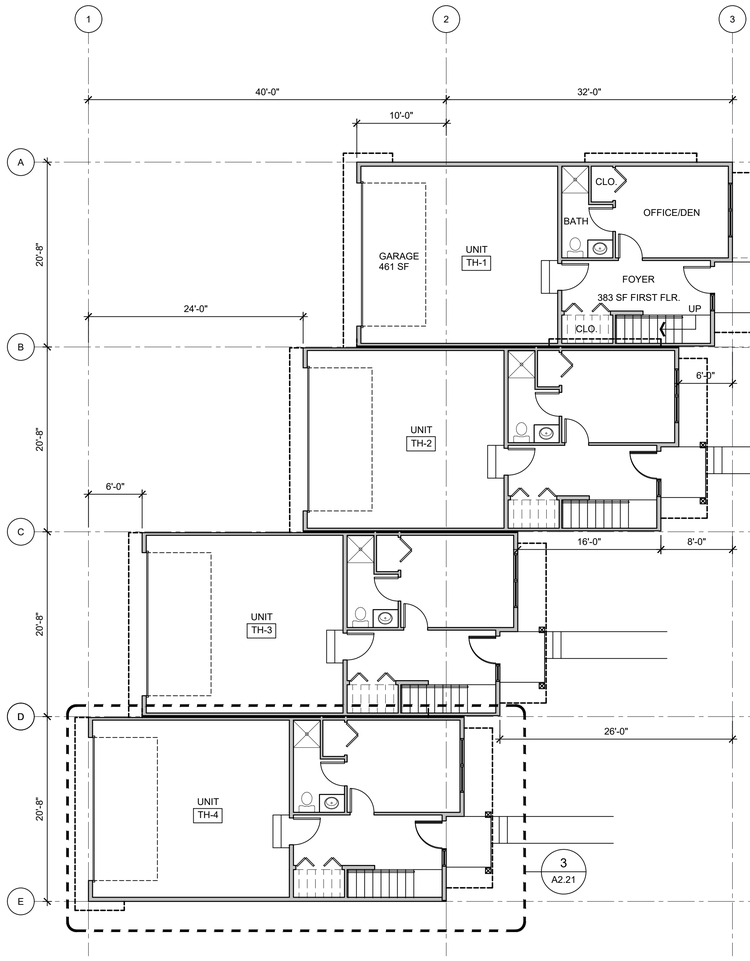

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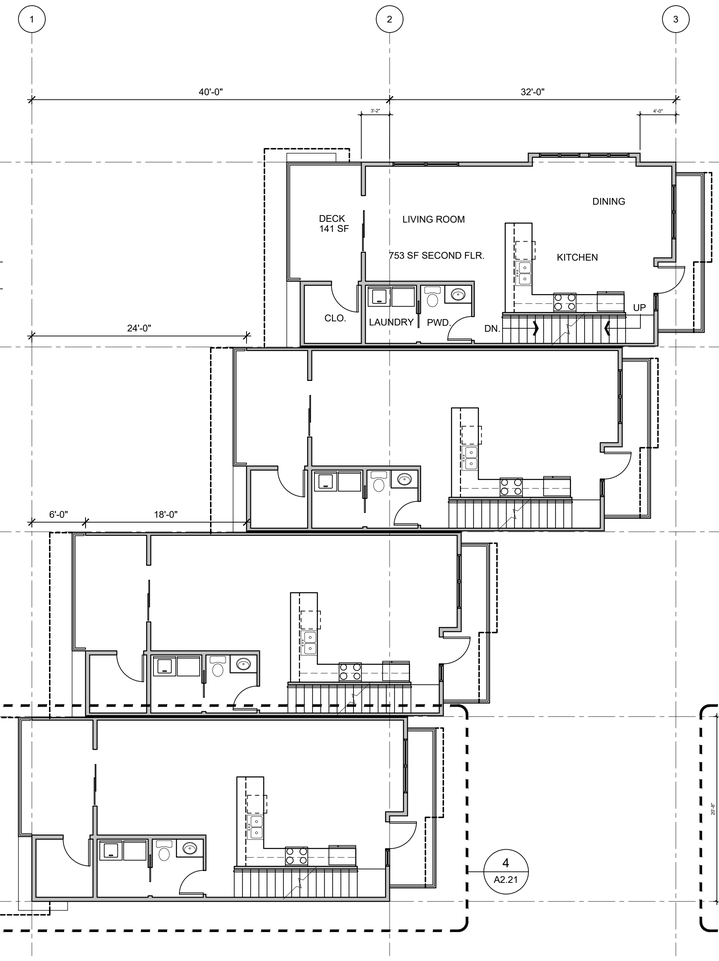

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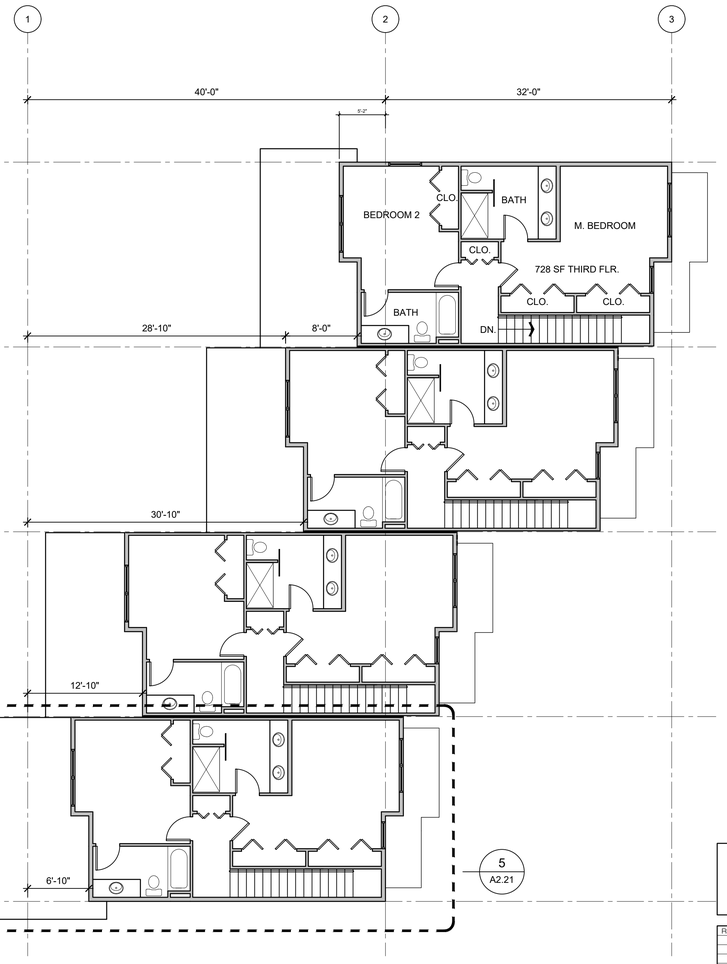

3 LEVEL THREE FLOOR PLAN
1/8" = 1'-0"

DESIGN REVIEW

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PLAN NORTH | TRUE NORTH

SCALE: 1/8"=1'-0" 0 8'

DEEMER ROAD TOWNHOMES

TOWNHOUSES BUILDING FLOOR PLANS

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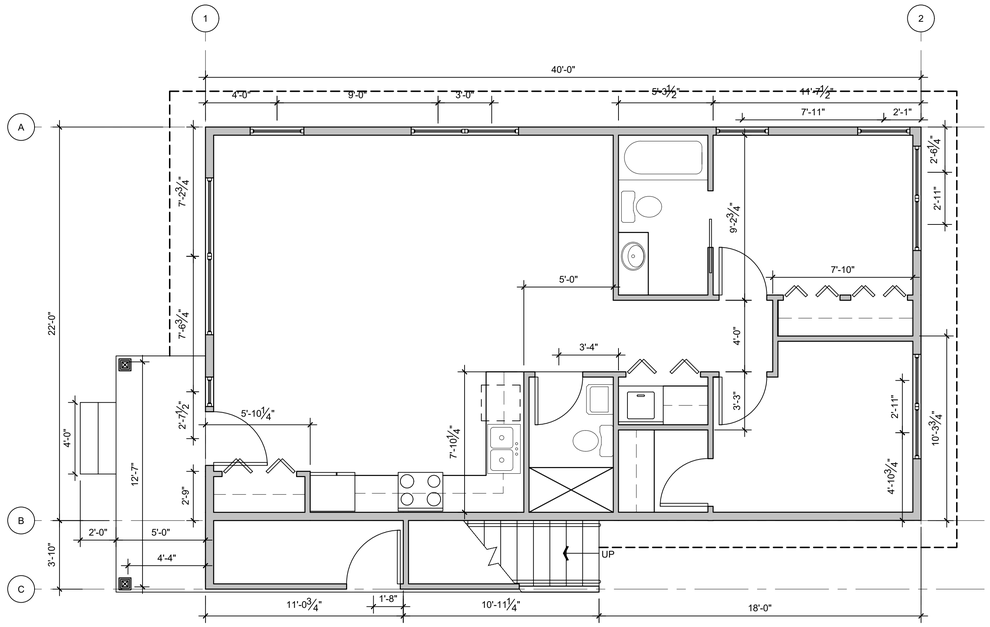

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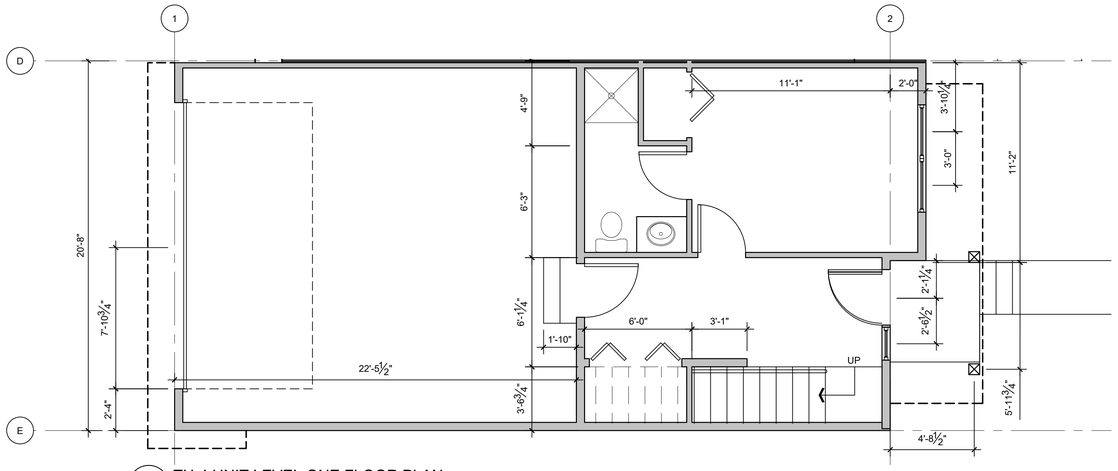

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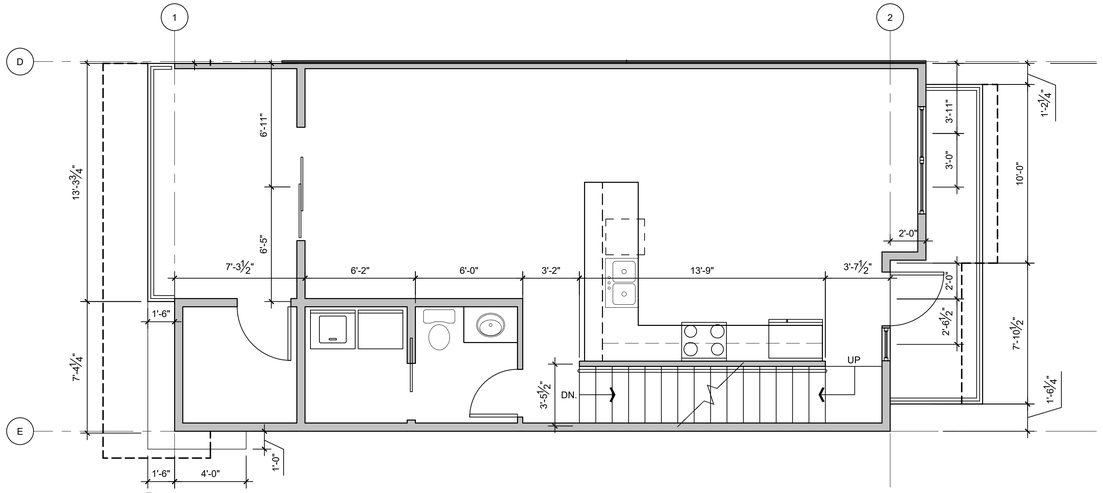
1/4" = 1'-0"



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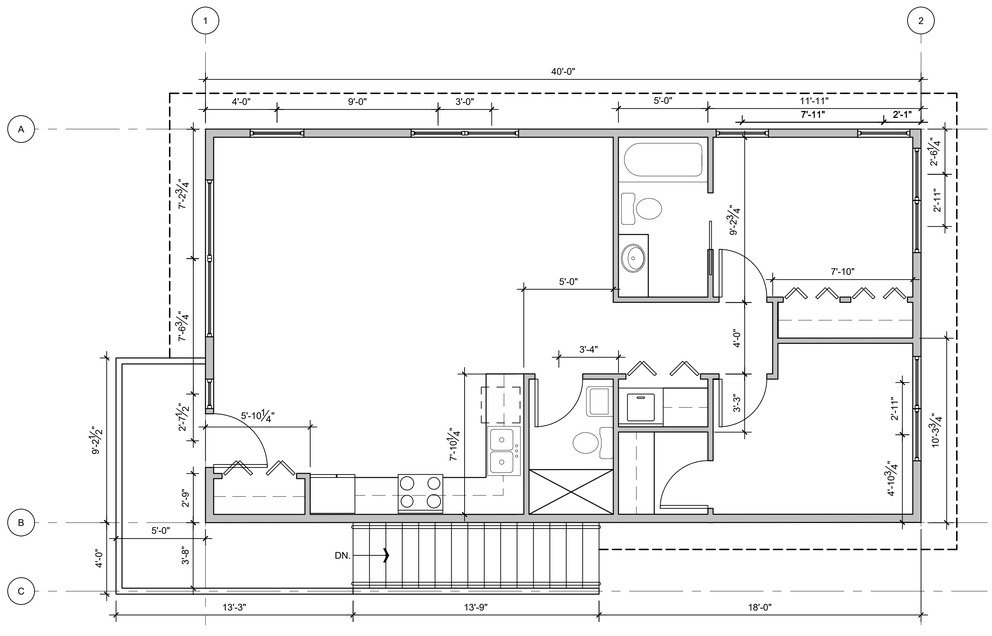
1/4" = 1'-0"



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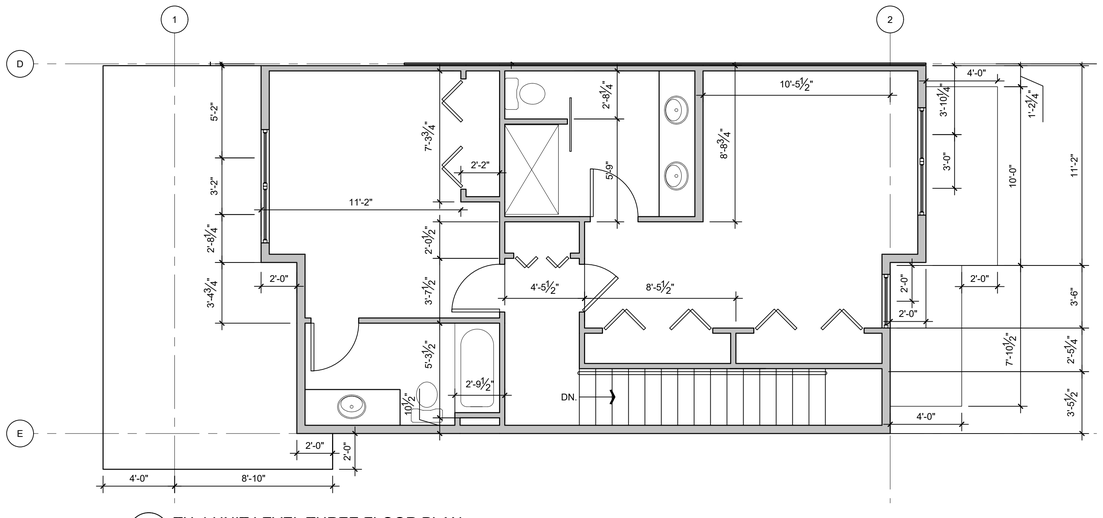

5 TH-4 UNIT LEVEL THREE FLOOR PLAN
1/4" = 1'-0"

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DEEMER ROAD TOWNHOMES

ENLARGED FLOOR PLANS

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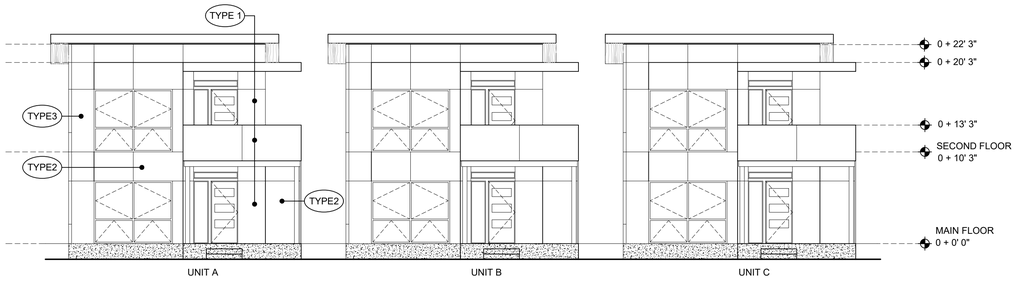

1 3 ADU BUILDING FRONT ELEVATION
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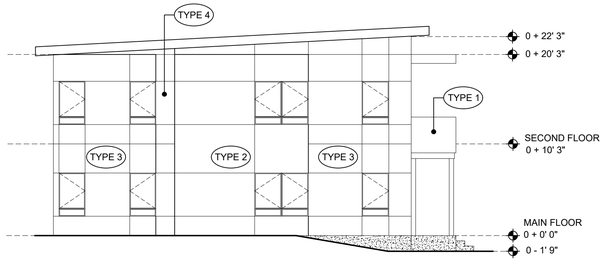

2 3 ADU BUILDING RIGHT ELEVATION
1/8" = 1'-0"

SIDING TYPES

TYPE 1	FIBER CEMENT PANEL COLOR: A
TYPE 2	FIBER CEMENT PANEL COLOR: B
TYPE 3	FIBER CEMENT PANEL COLOR: C
TYPE 4	FIBER CEMENT PANEL COLOR: D
TYPE 5	FIBER CEMENT PANEL COLOR: E
TYPE 6	FIBER CEMENT PANEL COLOR: F
TYPE 7	STONE
TYPE 8	WOOD

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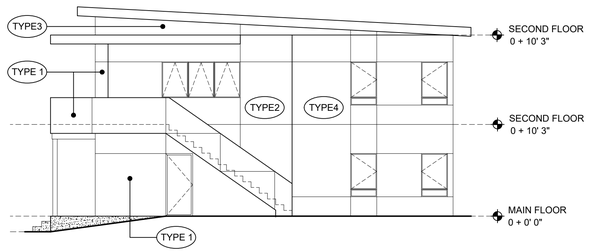

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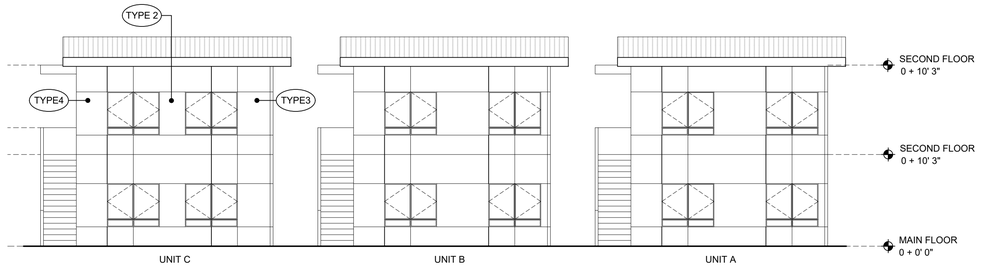
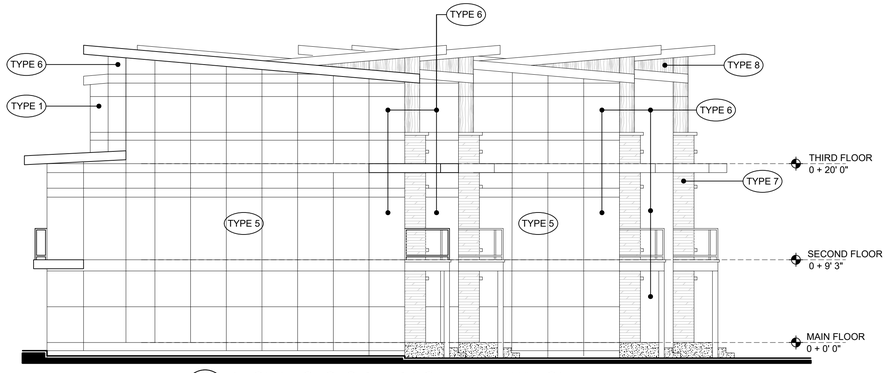
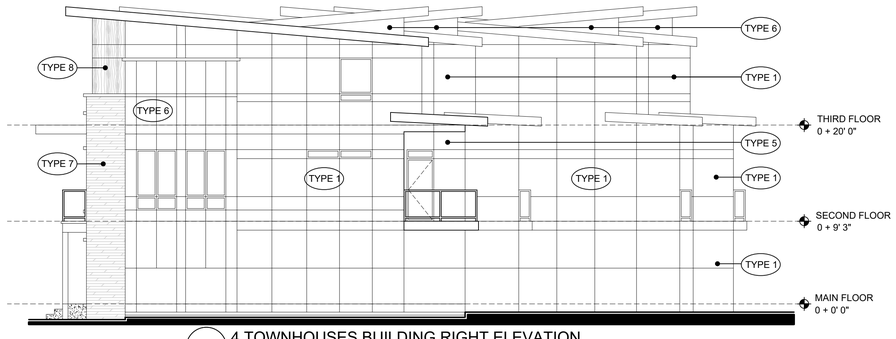


2 3 ADU BUILDING RIGHT ELEVATION
1/8" = 1'-0"

5 4 TOWNHOUSES BUILDING FRONT ELEVATION
1/8" = 1'-0"



6 4 TOWNHOUSES BUILDING LEFT ELEVATION
1/8" = 1'-0"



7 4 TOWNHOUSES BUILDING RIGHT ELEVATION
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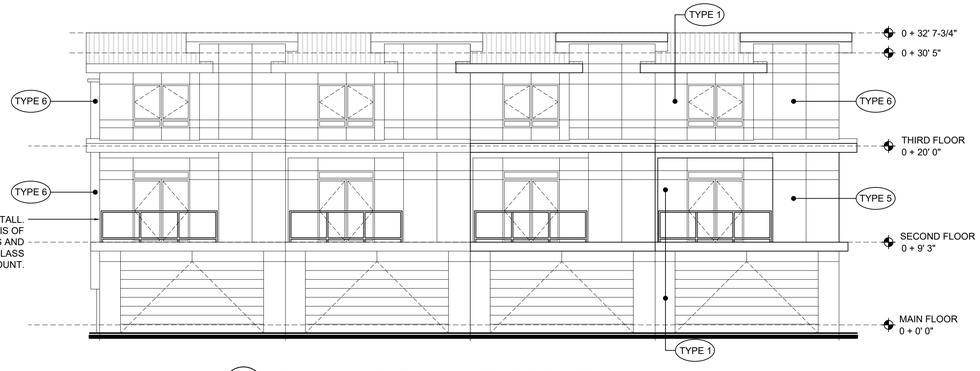

8 4 TOWNHOUSES BUILDING REAR ELEVATION
1/8" = 1'-0"

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DEEMER ROAD TOWNHOMES

ELEVATIONS

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DEEMER ROAD TOWNHOMES

PERSPECTIVES

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A3.02

Exhibit B

4056 Deemer Rd.

Rochelle Wallis <rwallis66@gmail.com>

Mon 3/11/2024 8:47 PM

To:Bell, Kathy M. <kbell@cob.org>

It appears the large existing trees along the north property line are not being retained, which is a shame for the community. Seems like the development could have respected the existing buffer the trees give between developments and the fire station.

There is also not enough parking provided on site for residents and visitors. Most certainly all the surface stalls will be used by residents and I bet some residents will be parking on the streets in adjacent developments. Anyone visiting these residents will not have anywhere to park on-site. I understand the need for affordable housing, and the desire to encourage alternate modes of transportation, but let's also be realistic about the current use of cars for transportation.

Exhibit C



CRITICAL AREAS ASSESSMENT

4056 DEEMER ROAD
PARCEL #380318 195488
BELLINGHAM, WA

FEBRUARY 2022

NW ECOLOGICAL SERVICES
2801 Meridian St, Suite 202, Bellingham, WA 98225
nwecological.com | t 360.734.9484

EXECUTIVE SUMMARY

Northwest Ecological Services, LLC (NES) was retained to complete a critical areas assessment for the one-acre parcel (#380318 195488) commonly known as 4056 Deemer Road, located in Bellingham, Washington. The assessment performed by NES included identification of any wetlands, streams, protected fish and wildlife habitats, frequently flooded areas, and shorelines as observed within the review area. It did not include identification of the following critical areas: geologically hazardous areas or critical aquifer recharge areas.

All information contained in this report is based on available information and site conditions at the time of the site visit. This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to the City of Bellingham (COB), Washington State Department of Ecology (WDOE), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

Molly Porter (Professional Wetland Scientist [PWS] #2064) and Alexandre Pederson, NES ecologists, conducted a site visit in January of 2021 to document site conditions. NES identified one wetland (Wetland A) within the subject site, and one additional off-site wetland (Wetland B) within the larger review area.

The site wetlands were categorized using the WDOE 2014 Wetland Rating System. Wetland A is a Category III wetland with low (4) habitat points and Wetland B is a Category IV wetland with low (3) habitat points.

No Priority habitats (other than the identified wetlands) or species were identified within the subject site. However, the review area is mapped by WDFW to be within a Township with potential populations of big brown bat (*Eptesicus fuscus*). Habitat for this species is not present onsite. No habitat features (mines, caves, lava tubes) that would be used as hibernacula were present in the review area. Additionally, no larger trees with basal hollows that could be used as day roosts were observed.

No streams, lakes, frequently flooded areas, or shorelines were identified within the review area or immediate vicinity.

The site wetlands are expected to be regulated by one or more of the following agencies: COB, WDOE, and/or Corps.

The COB critical areas ordinance (CAO) requires buffers on regulated features. Wetland buffers are based on land use, wetland category, and wildlife habitat points. Based on existing development on-site, land use would be considered moderate intensity under COB CAO; and wetlands would be anticipated to require the following buffers: Wetland A = 60 feet and Wetlands B = 40 feet.

Any future development onsite could potentially be considered a high intensity land use under the COB CAO, and wetlands would be anticipated to require the following buffers: Wetland A = 80 feet and Wetland B = 50 feet.

NES QUALIFICATIONS

NES is a specialized service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services to both the public and private sectors. Our services include wetland assessments, biological assessments, wetland restoration and mitigation plans, natural resource analysis, environmental regulatory compliance, landscape and ecological design, and environmental impact assessment of plants, animals, fish and sensitive habitats. NES professionals have performed wetland and biological assessment over 39,000 acres [1991-2022] in Whatcom, Skagit, Island, Snohomish and King Counties.

NES staff qualifications summary:

- Molly Porter is an ecologist with NES and has provided environmental services within the north Puget Sound area since 2004. Ms. Porter obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. She is certified through SWS as a PWS, #2064.
- Collin Van Slyke is an ecologist with NES, providing environmental services for projects throughout the north Puget Sound. Mr. Van Slyke obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. His experience includes geographic information systems (GIS) management, exhibit creation, and wetland mitigation design and monitoring. He is certified through SWS as a PWS, #3129.
- Candice Trusty is an ecologist with NES and has been providing environmental services within the north Puget Sound since 2019. Ms. Trusty obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. Her experience includes the assessment of wetland and fish & wildlife critical areas, fish removal, biological surveying, and habitat restoration. She is certified through SWS as a WPIT.
- Michael Whitehurst is an ecologist with NES with a Bachelor of Science in Marine Biology from the University of West Florida and certificate in wetland science and management from the University of Washington. His experience includes marine and freshwater organism identification, marine and terrestrial botany, and water quality sampling and analysis.
- Alexandre Pederson is an ecologist with NES with a Bachelor of Science in Ecological Engineering from Oregon State University. His experience includes bioremediation, watershed and stormwater management, and sampling and analysis of biological, chemical, and physical properties of soils.

DISCLAIMER

Wetland, stream, and lake delineations and determinations are based upon protocols defined in manuals and publications produced by federal, state and local agencies. The wetland methodology used in this report is consistent with methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast* Region (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as required by WAC 173-22-035. The findings were based on observations of conditions at the time of the site visit(s).

This report is provided for the use and named recipient only and is not intended for use by other parties for any purpose. This report does not guarantee agency concurrence or permit approval.

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

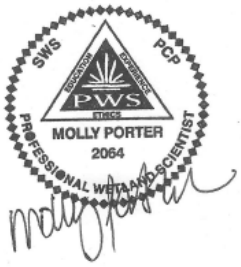
1.1 Scope of Work

Northwest Ecological Services, LLC (NES) was retained to complete a critical areas assessment for a parcel (#380318 195488) commonly known as 4056 Deemer Road in the City of Bellingham, Washington. The assessment performed by NES included identification of wetlands, streams, protected fish and wildlife habitats, frequently flooded areas, and shorelines as observed within the review area. It did not include identification of the following critical areas: geologically hazardous areas or critical aquifer recharge areas.

All information contained in this report is based on available information and site conditions at the time of the site visit. This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to the City of Bellingham (COB), Washington State Department of Ecology (WDOE), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

Project Contact:
Ben Diamand
5421 Selmaraine Drive
Culver City, CA 90230
T: 858.663.0240
Email: bdiamand@gmail.com

Critical Areas Assessment Report prepared by NES staff:
Molly Porter, PWS
Alexandre Pederson
Northwest Ecological Services, LLC
2801 Meridian Street, Suite 202, Bellingham, WA 98225
T: 360.743.9484
Email: molly@nwecological.com
alex@nwecological.com



1.2 Review Area

The review area included the entirety of the one-acre parcel (#380318 195488), commonly known as 4056 Deemer Road, and accessible areas within 150 feet per COB Code (Section 18, Township 38N, Range 03E W.M.) (Figure 1, Appendix B). An aerial photograph of the parcel and surrounding landscape is included as Figure 2 (Appendix B).

2.0 Assessment Methods

A critical areas assessment included an office review of existing documentation followed by a site visit on January 19th of 2022. NES then completed a functional assessment for any identified critical areas. NES conducted the site investigation and assessments in accordance with

methodology specific to each resource area (wetlands, fish and wildlife habitats, frequently flooded areas, and shorelines), as described below.

2.1 Document Review

NES reviewed available maps, drawings, and applicable reports pertaining to the project area. Specifically, NES reviewed existing documents related to soils, hydrology, vegetation, wetlands, fish and wildlife habitats, shorelines, and frequently flooded areas. NES reviewed the Critical Areas Report performed by Miller Environmental Services, LLC (MES, 2012), for the adjacent southern parcel (parcel #380318 224479). NES reviewed the Critical Areas Report performed by NES (NES, 2018) for the adjacent northeastern parcel (parcel #380318 228509).

2.2 Field Methods

2.2.1 Wetlands

The wetland delineation was conducted in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). This methodology is consistent with the WDOE's requirements established in 2011 (WAC 173-22-035) and COB CAO. To make a positive wetland determination, this methodology requires evidence that at least one positive wetland indicator be found for each of three parameters (vegetation, soils, and hydrology). An area is not considered a regulatory wetland if the area lacks indicators for any one of these three parameters under normal environmental conditions. Upland/wetland boundaries are delineated by locating the transition where soils, vegetation, or hydrology no longer indicate that wetland parameters are met. Methods for each of these parameters are as follows:

- **Vegetation:** The plant community at each sample site is considered to be hydrophytic (wetland) vegetation if the vegetation exhibits indicators of hydrophytic vegetation as defined in the delineation methodology (Corps, 2010). Most often the "Dominance Test" is used as the indicator. The sample plot meets the dominance test for hydrophytic vegetation if more than 50 percent of the dominant species from all strata have obligate wetland, facultative wetland, and/or facultative indicator status. Indicator status is taken from the Regional National Wetland Plant List (Lichvar, et al., 2014). Dominant species are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum (absolute percent cover), plus any other species that, by itself, accounts for at least 20 percent of the total. The wetland indicator status for each dominant species is then used to determine whether the plant community is dominated by hydrophytic vegetation. Occasionally, the "Prevalence Index" is used as the indicator of hydrophytic vegetation. The Prevalence Index is a weighted-average of all plant species in the sample plot.
- **Soils:** Soil test pits are hand dug to approximately 20 inches and soils are examined for hydric soil indicators. Formal soil test pits are labeled with a sample plot number and located on the delineation map. Soil color, including concentrations, depletions, or

gleying, if present, are colored using a Munsell color chart (Gretag-Macbeth, 2000). *Field Indicators of Hydric Soils in the United States* (USDA, NRCS, 2018) is used to determine hydric soil presence or absence.

- **Hydrology:** Wetland hydrology is assessed by an inspection at representative sample plots. Depth to shallow groundwater and/or saturation in each sample plot is recorded, as are observations of other indicators of hydrology including but not limited to water marks, drift lines, sediment deposits, and drainage patterns.
- **Growing Season:** Vegetation and hydrology indicators are dependent upon conditions during the "growing season." The growing season, as defined by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*, is when non-evergreen plants show biological activity (plant growth) and/or the soil temperature at 12 inches below the surface is a minimum of 41 degrees Fahrenheit (F) (Corps, 2010).

2.2.2 Streams and Lakes

If streams or lakes were identified on the property, NES marked the ordinary high water mark (OHWM) consistent with state law as defined in RCW 90.58.030. NES used field indicators to determine the OHWM based on the methodology contained in *Determining the Ordinary High Water Mark on Streams in Washington State* (Olson and Stockdale, 2010), Ecology Publication #08-06-001. During the site visit, the investigating ecologists also completed a stream characterization of basic stream attributes including depth, vegetation, substrate, and habitat features. If lakes were present, NES documented basic lake attributes including size, surrounding vegetation, and hydrologic connectivity.

2.2.3 Fish and Wildlife

NES documented observations of any state Priority species or federal Threatened, Endangered, or Proposed species protected under the Endangered Species Act (ESA) during the site visit. NES also reviewed the site for general wildlife habitat conditions and habitat connectivity. If streams were present, NES documented any obvious fish passage barriers, characterized general stream attributes (as described above), and documented any observations of fish during the site visit.

2.2.4 Shorelines

NES reviewed the local SMP text and maps to determine the potential presence of a regulated shoreline within the review area. During the site visit, NES field verified the presence of any shoreline and determined the extent of SMP jurisdiction based on SMP mapping, OHWM, floodways, wetlands, and floodplains. If shorelines were present, NES determined the OHWM consistent with state law as defined in RCW 90.58.030 and described under Streams and Lakes, below.

2.2.5 Frequently Flooded Areas

NES reviewed Federal Emergency Management Agency (FEMA) mapping to determine if frequently flooded areas are documented on site.

2.2.6 Mapping

During the site visit, NES staff flagged the identified critical areas and recorded their locations using a GPS/GNSS unit with reported sub-meter accuracy and 95% precision. The GPS waypoints were input to geographic information systems (GIS) mapping software to produce Figure 3 (Appendix B). Off-site features were mapped at a reconnaissance level using site specific documentation georeferenced into GIS from City IQ, field notes, aerial imagery, and LiDAR interpretation. **Features shown in Figure 3A (Appendix B) have been surveyed**.

3.0 FINDINGS

Molly Porter (Professional Wetland Scientist [PWS] #2064) and Alexandre Pederson, NES ecologists, conducted a site visit on January 19th of 2022 to document site conditions. The following description is based on observations from the site visit and information gathered during the document review. Photographs taken at the time of the site visit are included in Appendix C.

3.1 Landscape Setting and Parcel Overview

3.1.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **Aerial Photograph: Google Earth (Figure 2, Appendix B)**
  In aerial photographs, the review area is developed with a single-family home, attached garage, driveway, and landscaped lawn in the center of the parcel. The remainder of the parcel contains a mixture of ornamental trees and lawn grass. Land use in the adjacent parcels include high density residential housing mixed with single-family residential housing to the north, east, and south of the parcel, and commercial shopping centers to the west.
- **USDA, NRCS *Soil Survey of Whatcom County Area, Washington* (USDA, NRCS 2022) (Figure 4)**
  The NRCS soil survey (USDA, NRCS) maps one soil series within the review area: Whatcom silt loam, on 3 to 8 percent slopes (#179).

  Whatcom silt loam is mapped over the entirety of the review area. Whatcom silt loam is a non-hydric, moderately well drained soil in hydrologic group C. The soil has an average depth to the water table between 18 and 36 inches. The parent material consists of volcanic ash and loess over glaciomarine deposits.

3.1.2 Field Observations

Observations made during the site visit were consistent with background documentation. Deemer Road borders the western boundary of the subject parcel. The site is accessible via a private driveway off Deemer Road, which provides access to the single-family residence, attached garage, and parking area. The parcel is mostly flat, with site topography sloping north

to south at a one percent grade. The majority of the parcel is vegetated with mowed lawn and a mixture of native and ornamental trees in rows along the parcel boundaries. A few mature black cottonwood trees (*Populus balsamifera*) are located along the southern parcel boundary. The southern off-site extent of the review area is vegetated with a mixture of trees, shrubs, and thickets of Himalayan blackberry (*Rubus armeniacus*). The eastern off-site extent of the review area is primarily vegetated with pasture grass, reed canarygrass (*Phalaris arundinacea*), and a few black cottonwood trees. Bellingham Fire Department Station #6 is located to the north of the subject parcel.

The review area contains wetlands and uplands as described below.

3.2 Wetlands

NES identified one wetland (Wetlands A) in the subject site and one additional offsite wetland (Wetland B) within the larger review area (Figure 3, Appendix B).

3.2.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **United State Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper (USFWS, 2022)**
  The NWI Mapper does not indicate any wetlands within or in the immediate vicinity of the review area.
- **WDFW Priority Habitats and Species (PHS) Data on the Web Interactive Map (WDFW, 2022a) (Figure 6, Appendix B)**
  WDFW mapping is consistent with NWI mapping.
- **City of Bellingham City IQ (COB, 2022) (Figure 5, Appendix B)**
  City IQ maps three wetlands in the immediate vicinity of the review area, delineated by Miller Environmental Services, LLC.
- **Miller Environmental Services, LLC, Critical Areas Report – Wetlands and Fish and Wildlife Habitat Conservation Areas for the Deemer Road Property (MES, 2012)**
  A wetland delineation report prepared by Miller Environmental Services for the owner of 4050 Deemer Road, Bellingham, WA identifies a palustrine emergent, seasonally saturated wetland abutting the eastern boundary of the parcel (referred to as Wetland A in this report); and identifies two palustrine emergent, seasonally saturated wetlands located along the southern boundary of the parcel (referred to as Wetlands B and C in this report). These wetlands are located offsite, therefore, no data was collected.
- **Northwest Ecological Services, LLC, Critical Areas Assessment and Mitigation Plan for 4070 Deemer Road (NES, 2018)**
  A wetland delineation report prepared by Northwest Ecological Services for the owner of 4070 Deemer Road identified a palustrine emergent, seasonally saturated wetland to the northeast of the subject parcel (Wetland A). This wetland connects to Wetland A, as delineated by MES in 2012.

3.2.2 Field Observations

NES identified one wetland (Wetland A) within the subject site, and one additional wetland (Wetland B) offsite to south of the subject parcel. During the January site visit, NES observed that the on-site portion of Wetland A appears to connect with off-site Wetland C detailed in the MES report (MES, 2012). This connection is assumed due to observed inundation between the two areas of wetland. Figure 3 (Appendix B) maps the extent of the subject wetlands as determined through GPS mapping of the on-site portions and georeferencing the off-site portions detailed in the aforementioned reports.

NES documented wetland conditions at Sample Plot (SP) 2 and 4. The sample plot locations for the field delineation are shown in Figure 3 (Appendix B). Data sheets from the delineation are located in Appendix D of this report. The identified wetlands are summarized in Table 1 and described below.

Table 1. Wetland Classification Summary

Wetland	Hydrogeomorphic Class	Cowardin Classification	Approximate Size (acres)
Wetland A	Depressional	PEM	1.85*
Wetland B	Depressional	PEM	0.07**

(P: Palustrine, EM: emergent)
*Total size approximated including off-site extent.
**Surveyed area in the 2012 MES report

Wetland A

Wetland A is a palustrine emergent (PEM), depressional wetland located in the southern and eastern portions of the subject parcel. The eastern portion was flagged as "A" and the southern portion flagged as "C", but as detailed above, they appear to connect offsite.

Vegetation observed within the on-site portion of Wetland A included black cottonwood, bentgrass (*Agrostis sp.*), bluegrass (*Poa sp.*), red fescue (*Festuca rubra*), tall fescue (*Festuca arundinacea*), creeping buttercup (*Ranunculus repens*), Himalayan blackberry, and reed canarygrass.

The observable offsite extent of Wetland A included black cottonwoods, red alder (*Alnus rubra*) saplings, hardhack (*Spiraea douglasii*), creeping buttercup, reed canarygrass, Himalayan blackberry, and pasture grass species. Mitigation plantings were recently installed in the very northern extent of Wetland A and its buffer.

NES documented wetland soils at SP 2 and 4 (Figure 3, Appendix B).

IN SP 2, located along the southern parcel boundary, the topsoil was a very dark grayish brown (10YR 3/2) silty clay loam. The subsoil, beginning at a depth of five inches, was a very dark grayish brown (10YR 3/2) silty clay loam containing brown (7.5YR 4/4) redox concentrations. Soil in SP 2 met NRCS hydric soil indicator F6 (redox dark surface).

In SP4, located near the eastern parcel boundary, the topsoil was a very dark gray (10YR 3/1) silt loam. The subsoil, beginning at a depth of 11 inches, was a dark grayish brown (10YR 4/2) silty

clay loam with dark yellowish brown (10YR 3/4) redox concentrations. Soil at SP4 met NRCS soil indicator A11 (depleted below dark surface).

The on-site portion of Wetland A is situated in a shallow swale that extends from the southeastern corner to the southwestern corner of the subject parcel. Wetland A appears to experience seasonal saturation and inundation. Saturation within the top 12 inches of soil and up to two inches of ponding were observed within Wetland A at the time of the site visit. Sources of hydrology likely include direct precipitation, surface runoff from areas of higher elevation, and seasonally high or perched ground water. No outlets were observed for the on-site portion of Wetland A. However, a curtain drain was observed along the southern parcel boundary at the western-most extent of Wetland A. Bellingham City IQ maps a stormwater drain offsite, near the southwestern corner of the subject parcel. The stormwater drain and curtain drain potential drain south to North Fork Baker Creek (Figure 5, Appendix B).

Wetland B

Wetland B is a PEM depressional wetland located approximately 40-feet south of the subject parcel. Wetland B was not directly observed during the January site visit due to visibility constraints from dense shrub and blackberry thickets. Wetland B appears to be PEM due to the density of reed canarygrass in the area. For further details on Wetland B see the referenced MES report.

3.2.3 Wetland Categorization and Functional Assessment

NES categorized the identified wetlands using the WDOE Wetland Rating System for Western Washington: 2014 Update (Rating System) (Hruby, 2014) and the associated wetland rating form (January 2015). The Washington State Wetland Rating System categorizes wetlands based on specific attributes based on rarity, sensitivity to disturbance, and the functions they provide. This methodology identifies and quantifies the potential of various functions operating within a wetland. This determination is based on the physical characteristics of water quality, hydrologic, and habitat functions in the wetland and its buffers. Using this system, wetlands are given a score based on the functions provided by the wetland, and are classified as Category I (highest) through Category IV (lowest). A Category I rating is assigned to wetlands that have the highest value, opportunity and potential to provide functions, and are most difficult to replace.

The Rating System scores wetland function for three categories: water quality, hydrology, and habitat. Each functional category is rated for site potential, landscape potential, and value. Rating scores are given as either “High,” “Medium,” and “Low.”

Wetlands that rate “high” for water quality site potential typically have physical features that give the wetland the potential to provide water quality treatment. Wetlands that rate “high” for water quality landscape potential typically are in a position in the landscape that may receive potentially polluted runoff and therefore the wetlands has the opportunity to provide treatment. Wetlands that rate “high” for water quality value are typically valuable to society because they improve water quality in a basin with documented water quality impairment.

Wetlands that rate "high" for hydrologic site potential typically have physical characteristics that enable the wetland to reduce flooding and erosion by providing water storage. Wetlands that rate "high" for hydrologic landscape potential typically are in a setting where the wetlands receive runoff from developed or partially developed areas. Wetlands that rate "high" hydrologic value are typically valuable to society because they provide functions in a basin where flooding occurs.

Wetlands that rate "high" for wildlife habitat site potential typically have the physical features that provide breeding habitat, cover, and/or foraging habitat for a variety of species. Wetlands that rate "high" for habitat landscape potential are typically in a landscape position where little habitat fragmentation or loss has occurred and the wetland has the opportunity to provide wildlife habitat as multiple species may be present. Wetlands that rate "high" for habitat value typically provide value to society because the wetlands are adjacent to habitats or species that are protected by local, state, or federal regulations.

Functions with a "medium" rating provide the above functions to a lesser degree. Functions with a "low" rating are typically in wetlands that are degraded, are not supported by the surrounding landscape, or do not provide functions that are a value to society.

The WDOE Rating Forms for the identified wetland(s) are included at the end of this report in Appendix E. A summary of 2014 WDOE rating and scores are shown in Table 2.

Table 2. 2014 Wetland Functional Assessment

Wetland	Improving Water Quality	Hydrologic	Habitat	Total Score	WDOE Category
A	L/M/H (6)	M/M/M (6)	L/L/M (4)	16	III
B	M/M/H (7)	L/M/L (5)	L/L/L (3)	15	IV

H: High; M: Medium, L: Low; (Total Score)

In general, the assessed wetlands have moderate potential to perform water quality functions. Wetland A contains depressional areas and Wetland B appears to be situated in a closed depression. The depressional areas within these wetlands contain seasonal ponding, which allows for the settling out of particulates and increased treatment time of impounded waters. Wetlands A and B contain dense vegetation cover capable of providing runoff filtration and pollutant uptake. Wetlands A and B are located proximally to areas of dense urban development which have the potential to discharge pollutants into the subject wetlands. The review area is located within the Baker Creek sub-basin, a 303d listed water which has a TMDL for temperature. Therefore, the water quality improvement functions provided by the subject wetlands are of value.

Wetlands A and B have moderate potential to perform hydrologic functions. Wetlands A and B appear to receive runoff from surrounding development and ponding within the wetlands provides some live storage during rain events. The wetlands contain rigid vegetation required to reduce surface flow velocity. Wetland A appears to outlet to North Fork Baker Creek, a tributary of Squalicum Creek, which has documented down-stream surface flooding problems. Therefore, the hydrologic functions provided by Wetland A are of value. Wetland B is small and likely does not provide significant flood storage.

Wetlands A and B have low potential to provide habitat functions. The structural diversity of habitat within Wetlands A and B is limited and habitat features are lacking. Wetlands A and B lack species diversity and contain a high percentage of cover of invasive species. Wetlands A and B are separated from other undeveloped habitat areas by roads and urban development, which limits the habitat suitability for a variety of wildlife species. However, a forest block located east, along Cammack Creek and North Fork Baker Creek may provide habitat connectivity to the site.

3.3 Upland Areas

3.3.2 Field Observations

Upland within the review area is dominated by mowed lawn and contains some native and ornamental trees in rows along the parcel boundaries. Upland vegetation observed included black cottonwood, a variety of pine and ornamental species, red fescue, bentgrass, white clover (*Trifolium repense*), hairy cat's ear (*Hypochaeris radicata*), and reed canarygrass.

NES documented upland soils at SP 1, 3, and 5 (Figure 3, Appendix B)

- In SP 1, north of the western-most portion of Wetland A, the topsoil was a very dark grayish brown (10YR 3/2) silty clay loam. Beginning at a depth of 14 inches, the soil contained light olive brown (2.5Y 5/4) redox concentrations.
- In SP 3, west of the eastern extent of the on-site portion of Wetland A, the topsoil was a very dark grayish brown (10YR 3/2) silt loam. The subsoil, beginning at a depth of 14 inches, was a gray (5Y 5/1) sand containing grayish brown (10YR 5/2) depletions and yellowish brown (10YR 5/6) redox concentrations.
- In SP 5, north of the house, the topsoil was a very dark grayish brown (10YR 3/2) silt loam containing yellowish brown (10YR 5/4) redox concentrations The subsoil, beginning at a depth of eight inches, was a very dark grayish brown (10YR 3/2) silty clay loam containing dark yellowish brown (10YR 4/4) concentrations.

Soils within SPs 1 and 3 did not meet NRCS hydric soil indicators. Soil at SP 5 met NRCS hydric soil indicator F6 (redox dark surface). SP 5 was determined to be upland based on geomorphic position, lack of wetland hydrology indicators, and best professional judgement.

Soils were saturated at or above 12 inches in the upland plots, generally from -8 to -12 inches. However, this is likely due to a higher than average water table due to higher than average precipitation preceding the site visit and throughout November and December. Due to a lack of hydric soil and other conditions onsite, this observed hydrology is not anticipated to be typical nor would be likely to persist into the growing season. No wetland hydrology indicators were observed elsewhere within the parcel during the site visit.

3.4 Streams and Lakes

No streams or lakes are mapped or were observed within the vicinity of the review area.

3.4.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **City of Bellingham City IQ (COB, 2022) (Figure 5, Appendix B)**
  City IQ does not map any streams or lakes within the review area.
- **WDFW PHS (WDFW, 2022a) (Figure 6, Appendix B)**
  WDFW PHS is consistent with City IQ mapping
- **WDFW SalmonScape (WDFW, 2022b) (Figure 7, Appendix B)**
  WDFW SalmonScape is consistent with PHS and City IQ mapping.

3.4.2 Field Observations

Field observations confirm background documentation. The closest mapped streams are North Fork Baker Creek, located 310 feet southwest of the parcel, and Cammack Creek, located 490 feet to the east.

3.5 Fish and Wildlife

No Priority, Threatened, or Endangered species or associated habitats (other than the wetlands) are mapped or were observed within or in the vicinity of the review area. However, WDFW maps indicate that the subject parcel is located within a township with documented occurrences of big brown bat (*Eptesicus fuscus*). Habitat for this species is not present onsite.

3.5.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **COB City IQ (COB, 2022) (Figure 5, Appendix B)**
  No Priority Habitats or Species are mapped by City IQ within the review area. City IQ maps a forested restoration area (FR-157) offsite, 315 feet east of the subject parcel.
- **WDFW PHS (WDFW, 2022a) (Figure 6, Appendix B)**
  No Priority Habitats or Species are mapped within the review area. Big brown bats are mapped in the township but are not necessarily associated with this site specifically. Big brown bats are not a listed species federally or in Washington State, but breeding areas are considered a Priority habitat.
- **WDFW SalmonScape (WDFW, 2022b) (Figure 7, Appendix B)**
  No streams, fish-bearing or otherwise, are mapped by WDFW SalmonScape in the review area. However, Cammack Creek and North Fork Baker Creek are mapped near the review area and North Fork Baker Creek is mapped as fish bearing.

3.5.2 Field Observations

No threatened, endangered, or candidate species or associated habitats (other than the wetlands) were observed in the vicinity of the review area during the site visit.

The review area is mapped within a Township with potential populations of little brown bat. Habitat for this species is not present onsite. In Washington, these species can be found in lowland conifer-hardwood forest and riparian habitats (WDFW, 2016). No habitat features

(mines, caves, lava tubes) that would be used as hibernacula were present in the review area. Additionally, no larger trees with basal hollows that could be used as day roosts were observed.

The on-site extent of the review area contains little habitat suitable for wildlife species due to limited habitat structure and complexity. The off-site extent of the review area contains some suitable habitat for wildlife species that occupy urban habitats including deer, songbirds, and small mammals. However, usage of the site is likely to be limited to species that can tolerate urban environments due to surrounding development including roads and dense urban residential housing. Habitat is also limited by invasive vegetation, including large amounts of Himalayan blackberry and reed canarygrass. However, the site is adjacent to a protected forested block (FR-157) along Cammack Creek and North Fork Baker Creek, that likely serves as a habitat corridor for wildlife. Mitigation that has recently occurred in the northern portion of Wetland A is likely to increase habitat potential overtime.

3.6 Frequently Flooded Areas

The site is not mapped within a floodplain by FEMA.

3.6.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **FEMA National Flood Hazard Layer**
  The review area is mapped as Zone X (areas of minimal flooding).
- **COB City IQ**
  City mapping indicates that the subject parcel is outside of any frequently flooded areas.

3.6.2 Field Observations

Field observations confirm background resources.

3.7 Shorelines

The review area appears to be outside of the COB Shoreline Master Program (SMP) jurisdiction.

3.7.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **City of Bellingham SMP and Map**
  The review area is not mapped within COB SMP jurisdiction.

3.7.2 Field Observations

Field observations confirm COB mapping.

4.0 REGULATIONS

Agencies with regulatory authority over site wetlands, streams, fish and wildlife habitats, shorelines, and/or frequently flooded areas are summarized in Table 3 below.

Table 3. Critical Areas Summary

Feature	2014 WDOE Category	Regulatory Authority				Corps Hydrology Classification	Regulated Buffer (ft) *
		COB	Corps	WDOE	WDFW		
Wetland A	III	X	X	X		Adjacent to an RPW	60/ 80
Wetland B	IV	X		X		Isolated	40/ 50

* Moderate intensity land use buffer/ high intensity buffer

4.1 City of Bellingham

The COB Critical Areas Ordinance (CAO) states that no activity may be conducted within a regulated wetland, stream, or buffer without critical areas review and approval. Activities impacting regulated wetlands generally must provide mitigation sufficient to maintain or enhance the wetland functions. The following wetlands, streams, and HCAs under the jurisdiction of the COB CAO are located within or in the immediate vicinity of the review area:

- Wetlands A and B

The COB regulates all wetlands, regardless of size. The COB requires a buffer around regulated critical areas to protect functions. The buffer must remain naturally vegetated except where it can be enhanced to improve the functions. Wetland buffers are measured from the wetland edge. Standard wetland buffer widths are determined according to proposed or existing land use intensity, the overall wetland category, and the habitat rating.

Based on existing development onsite, land use would be considered moderate intensity under COB CAO; and wetlands would be anticipated to require the following buffers: Wetland A = 60 feet and Wetland B = 40 feet.

Any future development onsite could potentially be considered a high intensity land use under the COB CAO, and wetlands would be anticipated to require the following buffers: Wetland A = 80 feet and Wetland B = 50 feet. **Moderate and high-intensity land use buffers are shown in Figure 3 (Appendix B).**

The COB requires that buildings and other structures be **setback a minimum of 15 feet from the edge of critical area buffers**, or from the critical areas where no buffer is required (BMC 16.55.340(G)). Uses allowed within the 15-foot setback include: landscaping; uncovered decks; building overhangs; impervious surfaces such as driveways, roads, parking lots, and patios, provided that they conform to applicable water quality standards and that construction equipment does not enter or damage the buffer or critical area. Clearing and grading, and wells are also allowed within the setback.

4.2 Washington State Department of Ecology

WDOE has authority over discharge into all wetlands (including isolated wetlands) and streams and can impose buffers and compensatory mitigation for impacts (RCW 90.48).

Under Section 401 of the Clean Water Act (CWA), any activity involving a discharge into waters of the U.S. authorized under a Federal permit must receive a CWA Section 401 Water Quality Certification (WQC). WDOE is authorized to make WQC decisions on federal, public and privates lands in Washington, with a few exceptions (where EPA or Tribes have authority). WDOE reviews all CWA Section 404 permit applications received by the Corps for WQC. WDOE requires an "individual" review of all wetland disturbances greater than one-half acre, or for projects in tidal waters or where impacts to wetlands and streams are determined to require additional review.

4.3 Washington State Department of Fish and Wildlife

The WDFW requires issuance of a Hydraulic Project Approval (HPA) prior to any activities that may directly or indirectly affect streams or associated wetlands. The WDFW is not anticipated to regulate site wetlands. However only the WDFW has the authority to make this determination.

4.4 U.S. Army Corps of Engineers

The Corps regulates the discharge of dredged or fill material into wetlands, streams, and other drainages that connect to Waters of the United States (WOTUS) under Section 404 of the CWA. The Corps regulates structures and/or work in or affecting the course, condition, or capacity of WOTUS under Section 10 of the Rivers and Harbors Act of 1899. The Corps requires pre-construction notification for **all** disturbances to wetlands, streams, and potentially to other drainages (ditches/ tributaries) prior to commencing any work. It is incumbent upon the landowner to disclose disturbances.

The Environmental Protection Agency (EPA) and the Corps have published a final rule defining the scope of waters federally regulated under the Clean Water Act. The Corps hydrologic classification is based on whether a surface water meets the definition of or is connected to a waterbody that meets the definition of a Traditional Navigable Water (TNW) or a Relatively Permanent Water (RPW). A TNW is a navigable water protected under Section 10 of the Rivers and Harbors Act of 1899 or other waters currently or historically used or susceptible to use in interstate or foreign commerce. An RPW is a surface stream or river that exhibits continuous flow of more than three months out of the year.

The Corps will automatically assert jurisdiction over some surface waters and will need to complete a "significant nexus" determination for others, depending on the degree of connection to other waters and the hydrologic classification of these associated waters.

Wetland hydrologic classification and connectivity is described in this report as the "Corps hydrologic classification" in the above table using definitions provided in current Corps guidance documents.

Only the Corps has the authority to make jurisdictional determinations; however, the following is a description of the anticipated determinations. Wetland B appears isolated and is not anticipated to be regulated by the Corps. Wetland A appears to potentially drain to an RPW (North Fork Barker Creek) and ultimately to Bellingham Bay (a TNW). Therefore, Wetland A is likely to be regulated by the Corps. **A Corps Jurisdictional Determination (JD) would be needed to confirm this.**

Activities in Waters of the United States that require Corps authorization may qualify for authorization under one of the general Nationwide Permits (NWPs) if the activities meet the criteria. In the more commonly used NWPs, discharge (fill) is limited to under 1/2 acre of wetland, 300 linear feet of stream, and 1/3 acre of tidal waters. Discharge exceeding the NWP thresholds requires an Individual Permit from the Corps. Mitigation is required for most activities. The Corps also has discretion to disallow disturbance to high quality wetlands. As part of their permit review, the Corps must verify the project complies with Section 7 of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and Section 106 of the National Historic Preservation Act, (including archeological sites).

4.5 Mitigation Sequencing

Local, state, and federal agencies require projects impacting wetlands, streams, or wildlife HCAs, and/or shorelines to follow mitigation sequencing. Mitigation sequencing is a process where applicants show they have avoided all impacts to regulated areas and their buffers to the furthest extent possible. In some cases, if alteration to the regulated area is deemed unavoidable, impacts may be allowed if all adverse impacts resulting from a development proposal are mitigated using best available science so as to result in no net loss of critical area functions and values. When alteration or impact to a regulated area is proposed, the applicant must demonstrate that all reasonable efforts have been taken to mitigate impacts in the following, prioritized, order: 1) Avoid, 2) Minimize, 3) Rectify, 4) Reduce, 5) Compensate.

APPENDIX A: REFERENCES

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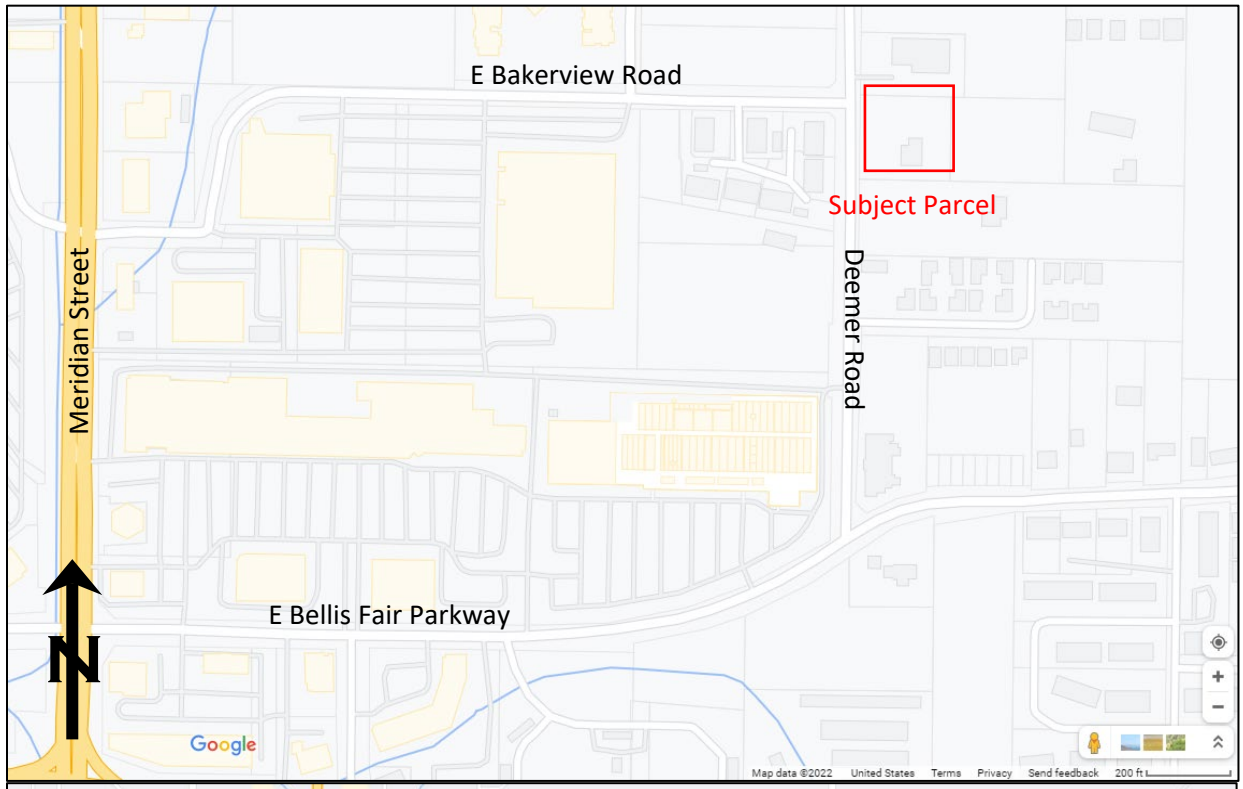
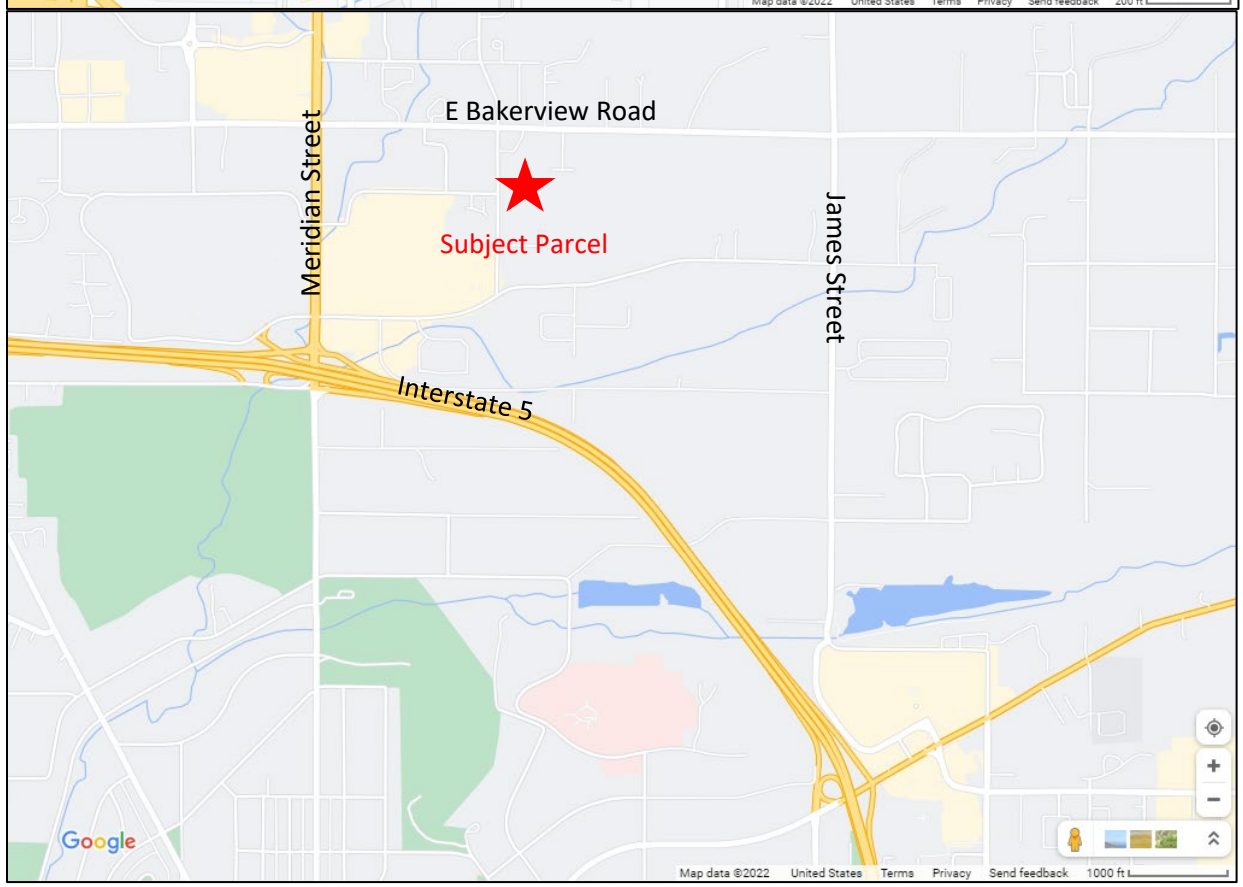
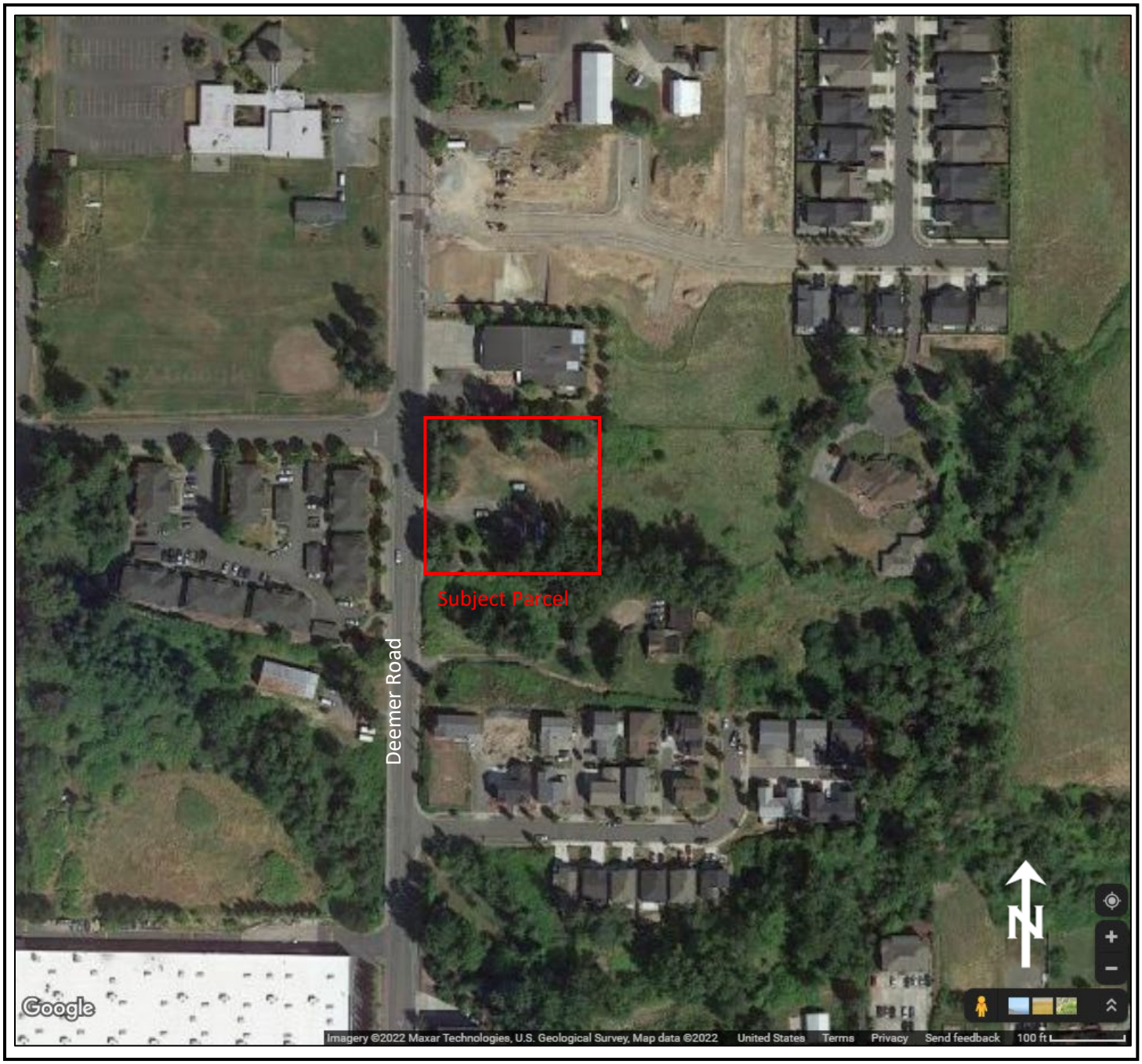
APPENDIX B: FIGURES



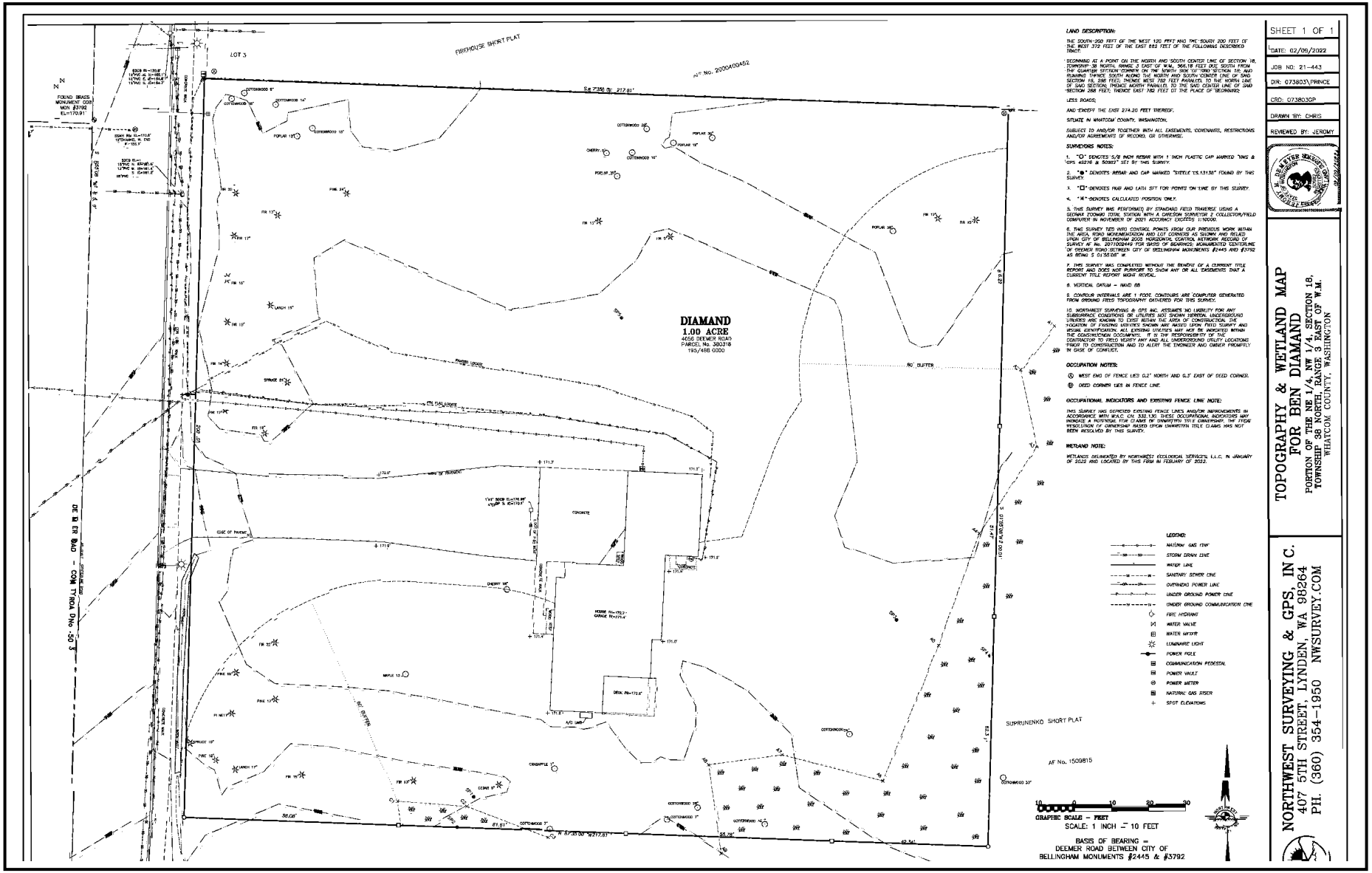


ECOLOGICAL NORTHWEST	**Vicinity Map** **(Google Maps)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 1** **FEB 2022**



ECOLOGICAL NORTHWEST	**Aerial Photo** **(Google Earth)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 2** **FEB 2022**

Ecological Northwest	**Wetland Map** **4056 Deemer Road - Parcel #380318 195488** **Critical Areas Assessment**	**Figure 3** **FEB 2022**



LAND DESCRIPTION:

THE SOUTH 200 FEET OF THE WEST 120 FEET AND THE SOUTH 200 FEET OF THE WEST 372 FEET OF THE EAST 882 FEET OF THE FOLLOWING DESCRIBED TRACT:

BEGINNING AT A POINT ON THE NORTH AND SOUTH CENTER LINE OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 3 EAST OF W.M., 566.78 FEET DUE SOUTH FROM THE QUARTER SECTION COMMON ON THE NORTH SIDE OF SAID SECTION 18; AND RUNNING THENCE SOUTH ALONG THE NORTH AND SOUTH CENTER LINE OF SAID SECTION 18, 280 FEET; THENCE WEST 750 FEET PARALLEL TO THE NORTH LINE OF SAID SECTION; THENCE NORTH PARALLEL TO THE SAID CENTER LINE OF SAID SECTION 280 FEET; THENCE EAST 750 FEET OF THE PLACE OF BEGINNING;

LESS ROADS;

AND EXCEPT THE EAST 274.20 FEET THEREOF.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SUBJECT TO AND/OR TOGETHER WITH ALL EASEMENTS, COVENANTS, RESTRICTIONS AND/OR AGREEMENTS OF RECORD, OR OTHERWISE.

SURVEYORS NOTES:

1. "O" DENOTES 5/8 INCH REBAR WITH 1 INCH PLASTIC CAP MARKED "NWS & GPS 48276 & 50307" SET BY THIS SURVEY.
2. "●" DENOTES REBAR AND CAP MARKED "EYDLE LS 13138" FOUND BY THIS SURVEY.
3. "□" DENOTES PAB AND LATH SET FOR POINTS ON LINE BY THIS SURVEY.
4. "R" DENOTES CALCULATED POSITION ONLY.
5. THIS SURVEY WAS PERFORMED BY STANDARD FIELD TRAVERSE USING A GEOMAX ZOOM30 TOTAL STATION WITH A CARLSON SURVEYOR 2 COLLECTOR/FIELD COMPUTER IN NOVEMBER OF 2021 ACCURACY EXCEEDS 1:10000.
6. THIS SURVEY TIED INTO CONTROL POINTS FROM OUR PREVIOUS WORK WITHIN THE AREA, ROAD MONUMENTATION AND LOT CORNERS AS SHOWN AND RELIED UPON CITY OF BELLINGHAM 2003 HORIZONTAL CONTROL NETWORK, RECORD OF SURVEY AF No. 2071002449 FOR BASIS OF BEARINGS; MONUMENTED CENTERLINE OF DEEMER ROAD BETWEEN CITY OF BELLINGHAM MONUMENTS #2445 AND #3792 AS BEING S 01°55'08" W.
7. 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.
8. VERTICAL DATUM – NAVD 88
9. CONTOUR INTERVALS ARE 1 FOOT. CONTOURS ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY.
10. NORTHWEST SURVEYING & GPS INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR UTILITIES NOT SHOWN HEREON. UNDERGROUND UTILITIES ARE KNOWN TO EXIST WITHIN THE AREA OF CONSTRUCTION. 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.

OCCUPATION NOTES:

(X) WEST END OF FENCE LIES 0.2' NORTH AND 0.3' EAST OF DEED CORNER.
(D) DEED CORNER LIES IN FENCE LINE.

OCCUPATIONAL INDICATORS AND EXISTING FENCE LINE NOTE:

THIS SURVEY HAS DEPICTED EXISTING FENCE LINES AND/OR IMPROVEMENTS IN ACCORDANCE WITH WAC. CH. 332-130. THESE OCCUPATIONAL INDICATORS MAY INDICATE A POTENTIAL YEAR CLAIMS OF OWNERSHIP TITLE CONVEYANCE. THE TRUE RESOLUTION OF OWNERSHIP BASED UPON UNWRITTEN TITLE CLAIMS HAS NOT BEEN RESOLVED BY THIS SURVEY.

WETLAND NOTE:

WETLANDS DELINEATED BY NORTHWEST ECOLOGICAL SERVICES, L.L.C. IN JANUARY OF 2022 AND LOCATED BY THIS FIRM IN FEBUARY OF 2022.

SHEET 1 OF 1
DATE: 02/09/2022
JOB NO: 21-443
DIR: 073803\PRINCE
CRD: 073803GP
DRAWN BY: CHRIS
REVIEWED BY: JEROMY

TOPOGRAPHY & WETLAND MAP FOR BEN DIAMAND

PORTION OF THE NE 1/4, NW 1/4, SECTION 18, TOWNSHIP 38 NORTH, RANGE 3 EAST OF W.M.
WHATCOM COUNTY, WASHINGTON

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

ECOLOGICAL NORTHWEST

Site Plan
(Northwest Surveying & GPS. INC.)

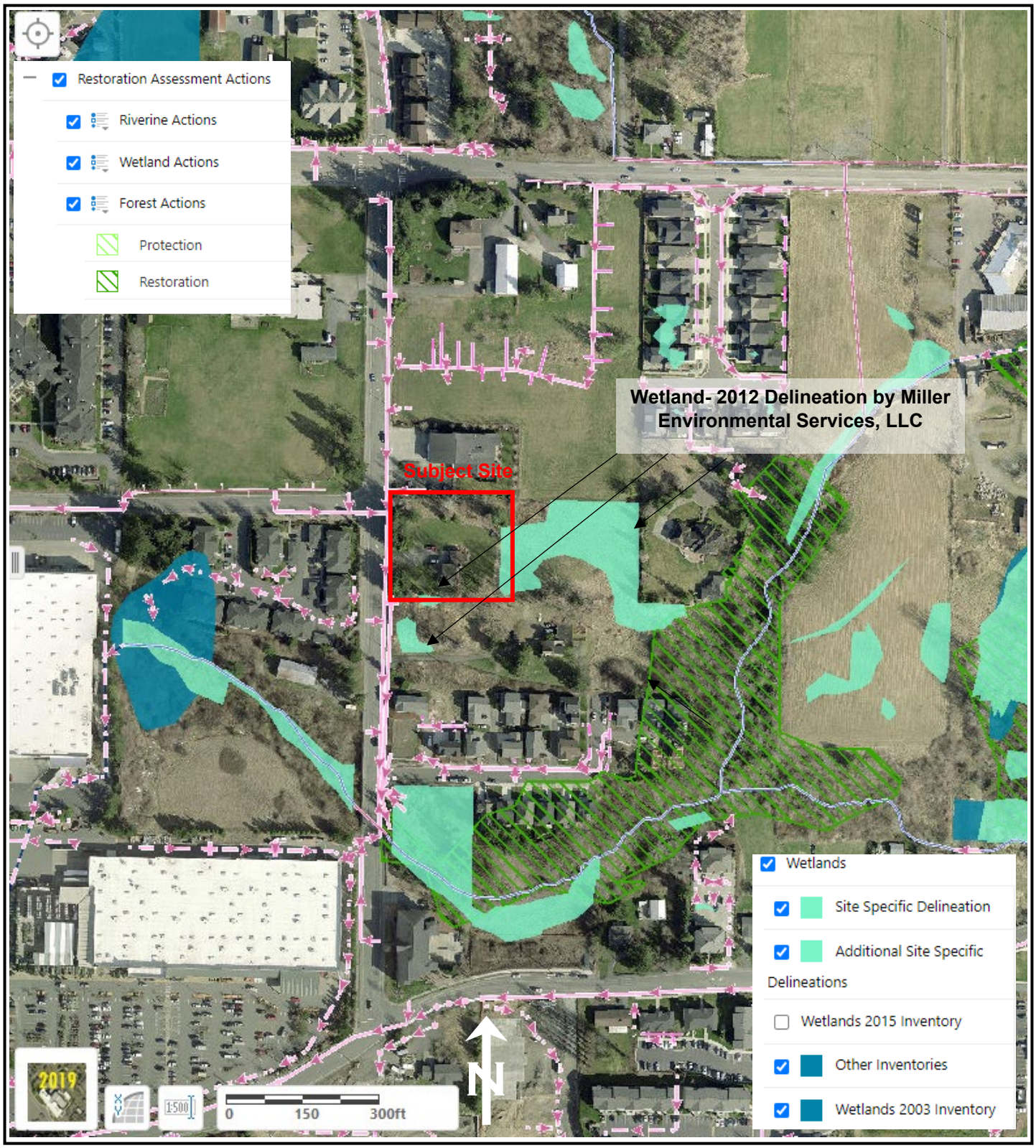
Figure 3A

4056 Deemer Road – Parcel #380318 195488
Critical Areas Assessment

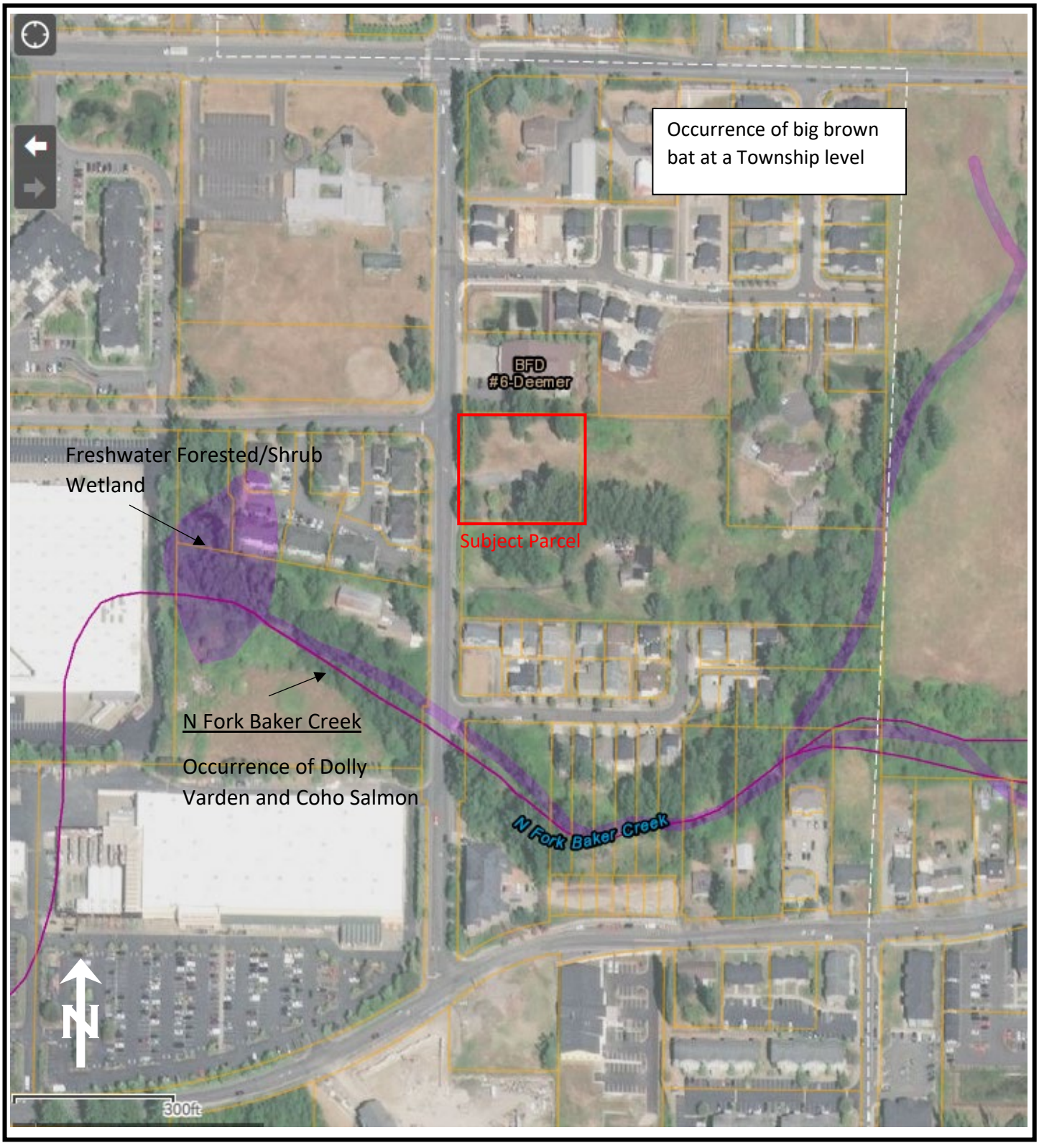
FEB 2022

Map Unit Symbol	Map Unit Name
179	Whatcom silt loam, 3 to 8 percent slopes

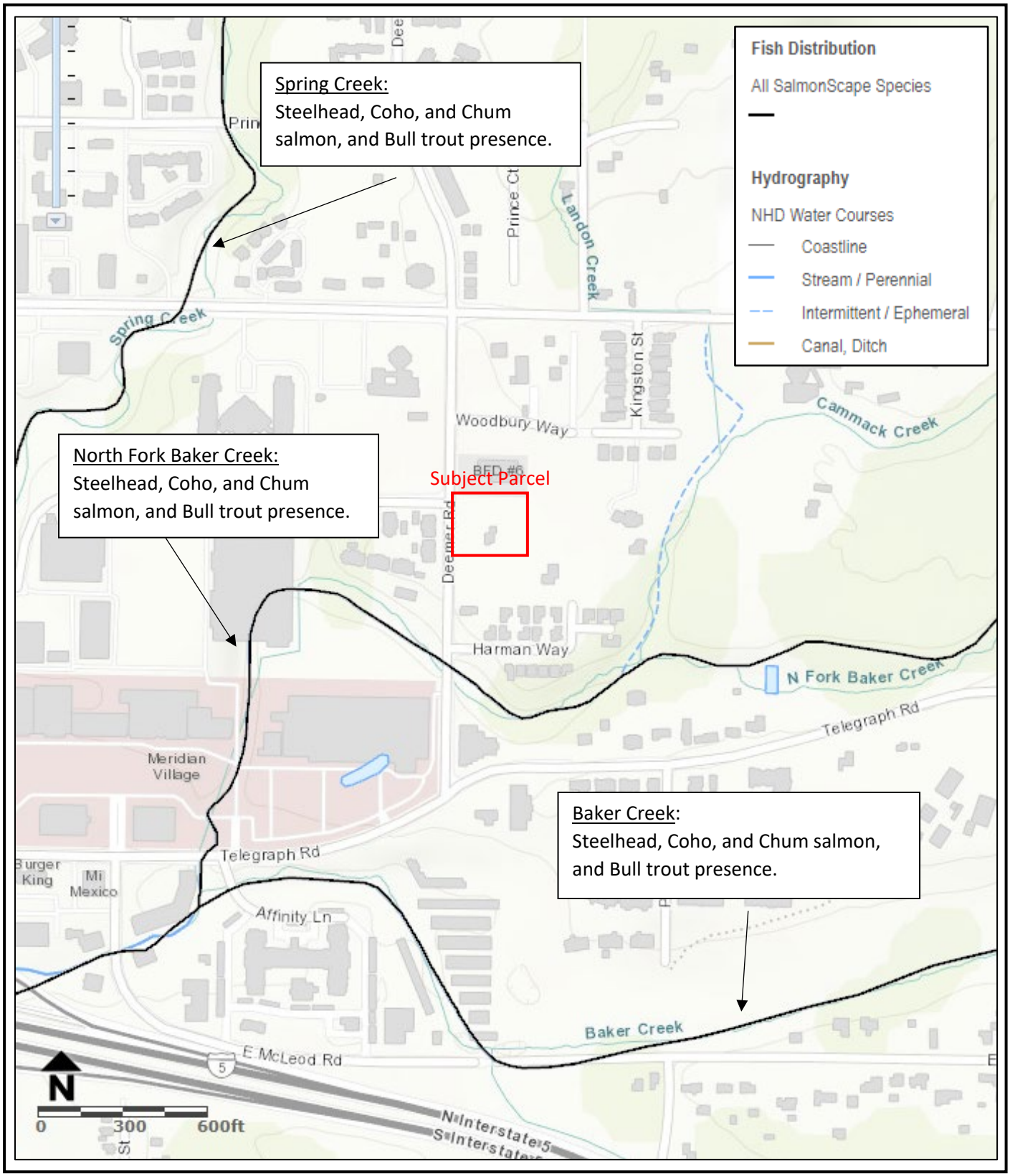
ECOLOGICAL NORTHWEST	**Soil Map** **(USDA, NRCS)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 4** **FEB 2022**



ECOLOGICAL NORTHWEST	**City IQ Map** **(COB, 2022)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 5** **FEB 2022**



ECOLOGICAL NORTHWEST	**PHS Map** **(WDFW, 2022)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 6** **FEB 2022**



ECOLOGICAL NORTHWEST	**SalmonScape Map** **(WDFW, 2022)** **4056 Deemer Road – Parcel #380318 195488** **Critical Areas Assessment**	**Figure 7** **FEB 2022**

APPENDIX C: PHOTOGRAPHS

Existing single-family residence, driveway, garage, and parking area

Upland in northern half of the site (facing north)

On-site upland along the northern parcel boundary (facing west)

Wetland B in background (obscured by shrubs)

Western extent of the on-site portion of Wetland A, along the southern parcel boundary (facing east)

Southern off-site extent of Wetland A (facing south)

Black cottonwoods in Wetland A in the southeastern corner of the subject parcel (facing east)

Southeastern corner of the subject parcel within Wetland A (facing northeast)

Eastern parcel boundary and eastern extent of the on-site portion of Wetland A (facing southeast)

Off-site extent of Wetland A from the eastern parcel boundary (facing east)

APPENDIX D: DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: 4056 Deemer Road - Parcel (#380318 195488)	City/County: Bellingham	Sample Date: 1/19/22
Applicant/Owner: Ben Diamand	State: WA	Sample Point: SP1
Investigator: M. Porter; A. Pederson	Section/Township/Range: 18/38N/03E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Whatcom silt loam #179	NWI Classification:	

Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Upland plot adjacent to western portion of Wetland A (old Wetland C). Positive indicates for all three were not observed.

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Sapling/Shrub Stratum (Plot size: 15 feet)			
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Herb Stratum (Plot size: 5 feet)			
Agrostis sp.	50	FAC	☒
Phalaris arundinacea	20	FAC	☒
Hypochaeris radicata	5	FACU	☐
		-	☐
		-	☐
		-	☐
Total Cover:	75		
Woody Vine Stratum (Plot size: 30 feet)			
		-	☐
		-	☐
Total Cover:	0		
% Bare Ground in Herb Stratum: 25			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total number of dominant species across all strata:	2 (AB)
Percent of dominant species that or OBL, FACW, FAC:	100 (A/AB)
Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

SOIL

Sample Point: SP1

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100			-	-	silty clay loam	
14-15	10YR 3/2	98	2.5Y 5/4	2	C	M	silty clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Very shallow dark surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type:
Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil at this location did not meet NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**MLRA 1,2,4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Frost-heave Hummocks (D7)
- ☐ FAC-neutral (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
Water Table Present? Yes ☒ No ☐ Depth (inches): **-12**
Saturation Present? Yes ☒ No ☐ Depth (inches): **-12** (include capillary fringe)

Wetland Hydrology Present?
Yes ☐ No ☒

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

Remarks: Saturation was observed at a depth of -12 inches. However, this is too deep to meet wetland hydrology criteria and is likely due to high winter water table or slow infiltration after rain events.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: 4056 Deemer Road - Parcel (#380318 195488) City/County: Bellingham Sample Date: 1/19/22
Applicant/Owner: Ben Diamand State: WA Sample Point: SP2
Investigator: M. Porter; A. Pederson Section/Township/Range: 18/38N/03E
Landform (hillslope, terrace, etc): Local Relief (concave, convex, none) : Subregion: LRR A
Soil Map Unit Name: Whatcom silt loam #179 NWI Classification:
Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐
Hydric Soil Present? Yes ☒ No ☐
Wetland Hydrology Present? Yes ☒ No ☐

Is the Sampled Area within a Wetland? Yes ☒ No ☐

Remarks: Wetland C (western portion of Wetland A). Positive indicators for all three were observed.

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Sapling/Shrub Stratum (Plot size: 15 feet)			
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Herb Stratum (Plot size: 5 feet)			
Phalaris arundinacea	90	FAC	☒
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	90		
Woody Vine Stratum (Plot size: 30 feet)			
Rubus armeniacus	20	FAC	☒
		-	☐
Total Cover:	90		
% Bare Ground in Herb Stratum: 10			

Dominance Test worksheet
Number of Dominant Species that are OBL, FACW, or FAC: ..2 (A)
Total number of dominant species across all strata: 2 (AB)
Percent of dominant species that or OBL, FACW, FAC: 100 (A/AB)

Prevalence Index worksheet

OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants[1]
☐ Problematic Hydrophytic Vegetation[1]
[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sample Point: SP2

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100			-	-	silty clay loam	
5-16	10YR 3/2	90	7.5YR 4/4	10	C	M	silty clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

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

Indicators for Problematic Hydric Soils[3]:
☐ 2 cm Muck (A10)
☐ Red parent material (TF2)
☐ Very shallow dark surface (TF12)
☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type:
Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)
☐ Water-stained (B9) (**MLRA 1,2,4A, and 4B**)
☐ Drainage Patterns (B10)
☐ Dry-season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ Frost-heave Hummocks (D7)
☐ FAC-neutral (D5)

Field Observations:
Surface Water Present? Yes ☐ No ☒ Depth (inches):
Water Table Present? Yes ☒ No ☐ Depth (inches): **-5**
Saturation Present? Yes ☒ No ☐ Depth (inches): **0** (include capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators were observed at this location.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: 4056 Deemer Road - Parcel (#380318 195488)	City/County: Bellingham	Sample Date: 1/19/22
Applicant/Owner: Ben Diamand	State: WA	Sample Point: SP3
Investigator: M. Porter; A. Pederson	Section/Township/Range: 18/38N/03E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Whatcom silt loam #179	NWI Classification:	

Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Upland plot near eastern parcel boundary, west of Wetland A. Positive indicators for all three were not observed.

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Sapling/Shrub Stratum (Plot size: 15 feet)			
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Herb Stratum (Plot size: 5 feet)			
Moss	80	-	☒
Festuca rubra	20	FAC	☒
Ranunculus repens	10	FAC	☐
Agrostis sp.	10	FAC	☐
Poa sp.	10	-	☐
Trifolium repense	5	FAC	☐
Total Cover:	135		
Woody Vine Stratum (Plot size: 30 feet)			
		-	☐
		-	☐
Total Cover:	0		
% Bare Ground in Herb Stratum: 0			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
Total number of dominant species across all strata:	1 (AB)
Percent of dominant species that or OBL, FACW, FAC:	100 (A/AB)
Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	
Hydrophytic Vegetation Indicators: ☒ Dominance Test is > 50% ☐ Prevalence Index is ≤3.0[1] ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet) ☐ Wetland Non-Vascular Plants[1] ☐ Problematic Hydrophytic Vegetation[1] [1]Indicators of hydric soil and wetland hydrology must be present.	

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

SOIL

Sample Point: SP3

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100			-	-	silt loam	
14-16	5Y 5/1	60	10YR 5/2	25	D	M	sand	
			10YR 5/6	15	C	M		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)		Indicators for Problematic Hydric Soils[3]:
☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red parent material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very shallow dark surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

Restrictive Layer (if present): Type: Depth (inches):	**Hydric Soil Present? Yes ☐ No ☒**

Remarks: Soil at this location did not met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)
☐ Surface Water (A1)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-stained (B9) **(MLRA 1,2,4A, and 4B)**
☐ High Water Table (A2)	☐ Water-stained Leaves (B9) (**except MLRA 1, 2, 4A and 4B)**	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Salt Crust (B11)	☐ Dry-season Water Table (C2)
☐ Water marks (B1)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Sediment Deposits (B2)	☐ Hydrogen Sulfide Odor (C1)	☐ Geomorphic Position (D2)
☐ Drift Deposits (B3)	☐ Oxidized Rhizospheres along living roots (C3)	☐ Shallow Aquitard (D3)
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)	☐ Frost-heave Hummocks (D7)
☐ Iron Deposits (B5)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-neutral (D5)
☐ Surface Soil Cracks (B6)	☐ Stunted or Stresses Plants (D1) **(LRR A)**	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): Water Table Present? Yes ☒ No ☐ Depth (inches): **-12** Saturation Present? Yes ☒ No ☐ Depth (inches): **-8** (include capillary fringe)	**Wetland Hydrology Present?** **Yes ☐ No ☒**

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

Remarks: Wetland hydrology indicators were observed at this location. However, due to depth and non-hydric soil, this is not likely to be typical conditions. Hydrology observed is likely due to abnormally high water table after excessive November/December 2021 precipitation events.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: 4056 Deemer Road - Parcel (#380318 195488)	City/County: Bellingham	Sample Date: 1/19/22
Applicant/Owner: Ben Diamand	State: WA	Sample Point: SP4
Investigator: M. Porter; A. Pederson	Section/Township/Range: 18/38N/03E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Whatcom silt loam #179	NWI Classification:	

Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Wetland A near eastern parcel boundary. Positive indicators for all three were observed.

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Sapling/Shrub Stratum (Plot size: 15 feet)			
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Herb Stratum (Plot size: 5 feet)			
Agrostis sp.	30	FAC	☒
Ranunculus repens	30	FAC	☒
Festuca rubra	30	FAC	☒
Poa sp.	30	-	☒
Festuca arundinacea	5	-	☐
		-	☐
Total Cover:	125		
Woody Vine Stratum (Plot size: 30 feet)			
		-	☐
		-	☐
Total Cover:	0		
% Bare Ground in Herb Stratum: 0			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	3 (A)
Total number of dominant species across all strata:	4 (AB)
Percent of dominant species that or OBL, FACW, FAC:	75 (A/AB)
Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

SOIL

Sample Point: SP4

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/1	100			-	-	silt loam	
11-16	10YR 4/2	80	10YR 3/4	20	C	M	silty clay loam	gravel
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Very shallow dark surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type:
Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**MLRA 1,2,4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Frost-heave Hummocks (D7)
- ☐ FAC-neutral (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches):
Water Table Present? Yes ☒ No ☐ Depth (inches): **-7**
Saturation Present? Yes ☒ No ☐ Depth (inches): **0** (include capillary fringe)

Wetland Hydrology Present?
Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators were observed at this location.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: 4056 Deemer Road - Parcel (#380318 195488)	City/County: Bellingham	Sample Date: 1/19/22
Applicant/Owner: Ben Diamand	State: WA	Sample Point: SP5
Investigator: M. Porter; A. Pederson	Section/Township/Range: 18/38N/03E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Whatcom silt loam #179		NWI Classification:

Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Upland plot north of existing house. Positive indicators for all three were not observed.

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?
Abies grandis	5	FACU	☒
		-	☐
		-	☐
		-	☐
Total Cover:	5		
Sapling/Shrub Stratum (Plot size: 15 feet)			
		-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	0		
Herb Stratum (Plot size: 5 feet)			
Festuca rubra	70	FAC	☒
Agrostis sp.	30	FAC	☒
Trifolium repense	1	FAC	☐
		-	☐
		-	☐
		-	☐
Total Cover:	101		
Woody Vine Stratum (Plot size: 30 feet)			
		-	☐
		-	☐
Total Cover:	0		
% Bare Ground in Herb Stratum: 0			

Dominance Test worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 3 (AB)

Percent of dominant species that or OBL, FACW, FAC: 66 (A/AB)

Prevalence Index worksheet

OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sample Point: SP5

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	80	10YR 5/4	20	C	M	silt loam	
8-14	10YR 3/2	70	10YR 4/4	30	C	M	silty clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Very shallow dark surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**MLRA 1,2,4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Frost-heave Hummocks (D7)
- ☐ FAC-neutral (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): **-11**

Saturation Present? Yes ☒ No ☐ Depth (inches): **-11** (include capillary fringe)

Wetland Hydrology Present?

Yes ☐ No ☒

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

Remarks: Wetland hydrology indicators were observed at this location. However, due to depth and non-hydric soil, this is not likely to be typical conditions. Hydrology observed is likely due to abnormally high water table after excessive November/December 2021 precipitation events.

APPENDIX E: WDOE RATING FORMS

Wetland name or number Wetland A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 1/25/22

Rated by C. Van Slyke; A. Pederson Trained by Ecology? X Yes ___No Date of training 2014

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___Y X N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map Whatcom 2019

OVERALL WETLAND CATEGORY IV (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

_____**Category II** – Total score = 20 - 22

_____**Category III** – Total score = 16 - 19

__X__**Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H○ M⊙ L○	H○ M⊙ L○	H○ M○ L⊙	
Landscape Potential	H○ M○ L⊙	H○ M○ L⊙	H○ M⊙ L○	
Value	H⊙ M○ L○	H○ M○ L⊙	H○ M⊙ L○	**TOTAL**
Score Based on Ratings	6	4	5	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
Estuarine	I II	
Wetland of High Conservation Value	I	
Bog	I	
Mature Forest	I	
Old Growth Forest	I	
Coastal Lagoon	I II	
Interdunal	I II III IV	
None of the above	☒	

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	B
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number Wetland A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   NO – go to 3 **YES** – The wetland class is **Flats**
   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   NO – go to 4 **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   ___The water leaves the wetland **without being impounded**.

   NO – go to 5 **YES –** The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

NO – go to 6 **YES** – The wetland class is **Riverine**
NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to 7 X **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number Wetland A

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ⅓ of area points = 3 Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^{1}/_{10}$ of area points = 0	0
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 Add the points in the boxes above	7

Rating of Site Potential If score is: ___ **12-16 = H** X **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is: ___ **3 or 4 = H** ___ **1 or 2 = M** X **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	3

Rating of Value If score is: X **2-4 = H** ___ **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number Wetland A

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	7

Rating of Site Potential If score is: ___ **12-16 = H** X **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0
Total for D 5 Add the points in the boxes above	0

Rating of Landscape Potential If score is: ___ **3 = H** ___ **1 or 2 = M** X **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* ~~very small isolated~~ wetland points = 0 X There are no problems with flooding downstream of the wetland. points = 0	0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	0

Rating of Value If score is: ___ **2-4 = H** ___ **1 = M** X **0 = L** *Record the rating on the first page*

Wetland name or number Wetland A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

____	Aquatic bed	4 structures or more: points = 4
____	Emergent	3 structures: points = 2
____	Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
_X_	Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

____ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

0

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

____	Permanently flooded or inundated	4 or more types present: points = 3
_X_	Seasonally flooded or inundated	3 types present: points = 2
____	Occasionally flooded or inundated	2 types present: points = 1
____	Saturated only	1 type present: points = 0
____	Permanently flowing stream or river in, or adjacent to, the wetland	
____	Seasonally flowing stream in, or adjacent to, the wetland	
____	**Lake Fringe wetland**	**2 points**
____	**Freshwater tidal wetland**	**2 points**

0

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

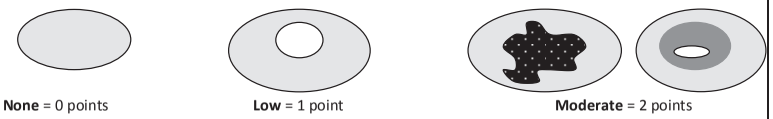
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

0

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points **Low** = 1 point **Moderate** = 2 points

All three diagrams in this row are **HIGH** = 3points

0

Wetland name or number Wetland A

H 1.5. Special habitat features:

Check the habitat features that are present in the wetland. *The number of checks is the number of points.*

- _X_ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).
- _X_ Standing snags (dbh > 4 in) within the wetland
- ___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)
- ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)*
- ____ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)*
- _X_ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)

3

Total for H 1 — Add the points in the boxes above: 3

Rating of Site Potential If score is: ___**15-18 = H** ___**7-14 = M** _X_**0-6 = L** *Record the rating on the first page*

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

H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*).

Calculate: % undisturbed habitat 21.2 + [(% moderate and low intensity land uses)/2] 4.7 = 25.9 %

If total accessible habitat is:

> 1/3 (33.3%) of 1 km Polygon	points = 3
20-33% of 1 km Polygon	points = 2
10-19% of 1 km Polygon	points = 1
< 10% of 1 km Polygon	points = 0

2

H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.

Calculate: % undisturbed habitat 34.2 + [(% moderate and low intensity land uses)/2] 8.6 = 42.8 %

Undisturbed habitat > 50% of Polygon	points = 3
Undisturbed habitat 10-50% and in 1-3 patches	points = 2
Undisturbed habitat 10-50% and > 3 patches	points = 1
Undisturbed habitat < 10% of 1 km Polygon	points = 0

1

H 2.3. Land use intensity in 1 km Polygon: If

> 50% of 1 km Polygon is high intensity land use	points = (- 2)
≤ 50% of 1 km Polygon is high intensity	points = 0

0

Total for H 2 — Add the points in the boxes above: 3

Rating of Landscape Potential If score is: ___**4-6 = H** _X_**1-3 = M** ___**< 1 = L** *Record the rating on the first page*

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

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.*

Site meets ANY of the following criteria: points = 2

- — It has 3 or more priority habitats within 100 m (see next page)
- — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)
- — It is mapped as a location for an individual WDFW priority species
- — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources
- — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1

Site does not meet any of the criteria above points = 0

1

Rating of Value If score is: ___**2 = H** _X_**1 = M** ___**0 = L** *Record the rating on the first page*

Wetland name or number Wetland A

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

X **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number Wetland B (offsite)

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B (offsite) Date of site visit: 1/19/22

Rated by M. Porter; A. Pederson Trained by Ecology? X Yes ___No Date of training 2014

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___Y X N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map Whatcom County GIS

OVERALL WETLAND CATEGORY IV (based on functions X or special characteristics___)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

_____**Category II** – Total score = 20 - 22

_____**Category III** – Total score = 16 - 19

X **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H○ M⊙ L○	H○ M○ L⊙	H○ M○ L⊙	
Landscape Potential	H○ M⊙ L○	H○ M⊙ L○	H○ M○ L⊙	
Value	H⊙ M○ L○	H○ M○ L⊙	H○ M○ L⊙	TOTAL
Score Based on Ratings	7	5	3	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
Estuarine	I II	
Wetland of High Conservation Value	I	
Bog	I	
Mature Forest	I	
Old Growth Forest	I	
Coastal Lagoon	I II	
Interdunal	I II III IV	
None of the above	☒	

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet (*can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	B
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number Wetland B (offsite)

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   NO – go to 3 **YES** – The wetland class is **Flats**
   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   NO – go to 4 **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   ___The water leaves the wetland **without being impounded**.

   NO – go to 5 **YES –** The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

NO – go to 6 **YES** – The wetland class is **Riverine**
NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

   NO – go to 7 X **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number Wetland B (offsite)

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions).* Yes = 4 No = 0		0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ⅓ of area points = 3 Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^{1}/_{10}$ of area points = 0		5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0		0
Total for D 1	Add the points in the boxes above	7

Rating of Site Potential If score is: ___ **12-16 = H** X **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	1

Rating of Landscape Potential If score is: ___ **3 or 4 = H** X **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	4

Rating of Value If score is: X **2-4 = H** ___ **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number Wetland B (offsite)

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0		2
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0		0
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5		3
Total for D 4	Add the points in the boxes above	5

Rating of Site Potential If score is: ___ **12-16 = H** ___ **6-11 = M** X **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	0
Total for D 5	Add the points in the boxes above	1

Rating of Landscape Potential If score is: ___ **3 = H** X **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* wetland is small and contains little water, does not provide significant flood storage points = 0 There are no problems with flooding downstream of the wetland. points = 0		0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0		0
Total for D 6	Add the points in the boxes above	0

Rating of Value If score is: ___ **2-4 = H** ___ **1 = M** X **0 = L** *Record the rating on the first page*

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

___Aquatic bed	4 structures or more:	points = 4
_X_Emergent	3 structures:	points = 2
___Scrub-shrub (areas where shrubs have > 30% cover)	2 structures:	points = 1
___Forested (areas where trees have > 30% cover)	1 structure:	points = 0

If the unit has a Forested class, check if:

___The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

0

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

___Permanently flooded or inundated	4 or more types present:	points = 3
___Seasonally flooded or inundated	3 types present:	points = 2
___Occasionally flooded or inundated	2 types present:	points = 1
_X_Saturated only	1 type present:	points = 0
___Permanently flowing stream or river in, or adjacent to, the wetland		
___Seasonally flowing stream in, or adjacent to, the wetland		
___**Lake Fringe wetland**		**2 points**
___**Freshwater tidal wetland**		**2 points**

0

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

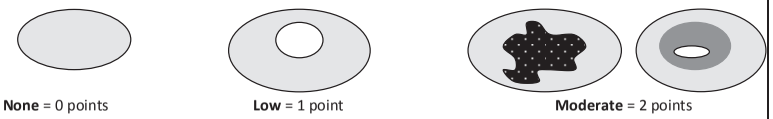
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

0

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points **Low** = 1 point **Moderate** = 2 points

All three diagrams in this row are **HIGH** = 3points

0

H 1.5. Special habitat features:

Check the habitat features that are present in the wetland. *The number of checks is the number of points.*

___Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).

___Standing snags (dbh > 4 in) within the wetland

___Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)

___Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)*

___At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)*

___Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)

0

Total for H 1 Add the points in the boxes above 0

Rating of Site Potential If score is:___**15-18 = H** ___**7-14 = M** _X_**0-6 = L** *Record the rating on the first page*

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

H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*).

Calculate: % undisturbed habitat 5 + [(% moderate and low intensity land uses)/2] 0 = 5 %

If total accessible habitat is:

> 1/3 (33.3%) of 1 km Polygon	points = 3
20-33% of 1 km Polygon	points = 2
10-19% of 1 km Polygon	points = 1
< 10% of 1 km Polygon	points = 0

0

H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.

Calculate: % undisturbed habitat 21 + [(% moderate and low intensity land uses)/2] 4 = 25 %

Undisturbed habitat > 50% of Polygon	points = 3
Undisturbed habitat 10-50% and in 1-3 patches	points = 2
Undisturbed habitat 10-50% and > 3 patches	points = 1
Undisturbed habitat < 10% of 1 km Polygon	points = 0

1

H 2.3. Land use intensity in 1 km Polygon: If

> 50% of 1 km Polygon is high intensity land use	points = (- 2)
≤ 50% of 1 km Polygon is high intensity	points = 0

-2

Total for H 2 Add the points in the boxes above -1

Rating of Landscape Potential If score is:___**4-6 = H** ___**1-3 = M** _X_**< 1 = L** *Record the rating on the first page*

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

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.*

Site meets ANY of the following criteria: points = 2

- It has 3 or more priority habitats within 100 m (see next page)
- It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)
- It is mapped as a location for an individual WDFW priority species
- It is a Wetland of High Conservation Value as determined by the Department of Natural Resources
- It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1

Site does not meet any of the criteria above points = 0

0

Rating of Value If score is:___**2 = H** ___**1 = M** _X_**0 = L** *Record the rating on the first page*

Wetland name or number Wetland B (offsite)

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number Wetland B (offsite)

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes –Go to **SC 1.1** No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No - Go to **SC 1.2**	**Cat. I** ☐
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are *Spartina*, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** ☐ **Cat. II** ☐
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to **SC 2.2** No – Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = **Category I** No = **Not a WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – **Contact WNHP/WDNR and go to SC 2.4** No = **Not a WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = **Category I** No = **Not a WHCV**	**Cat. I** ☐
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** No = **Is not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Is a Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Is a Category I bog** No = **Is not a bog**	**Cat. I** ☐

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I** ☐
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon**	**Cat. I** ☐
SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. II** ☐
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to **SC 6.1** No = **not an interdunal wetland for rating**	**Cat I** ☐
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2**	**Cat. II** ☐
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3**	**Cat. III** ☐
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat. IV** ☐
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	-

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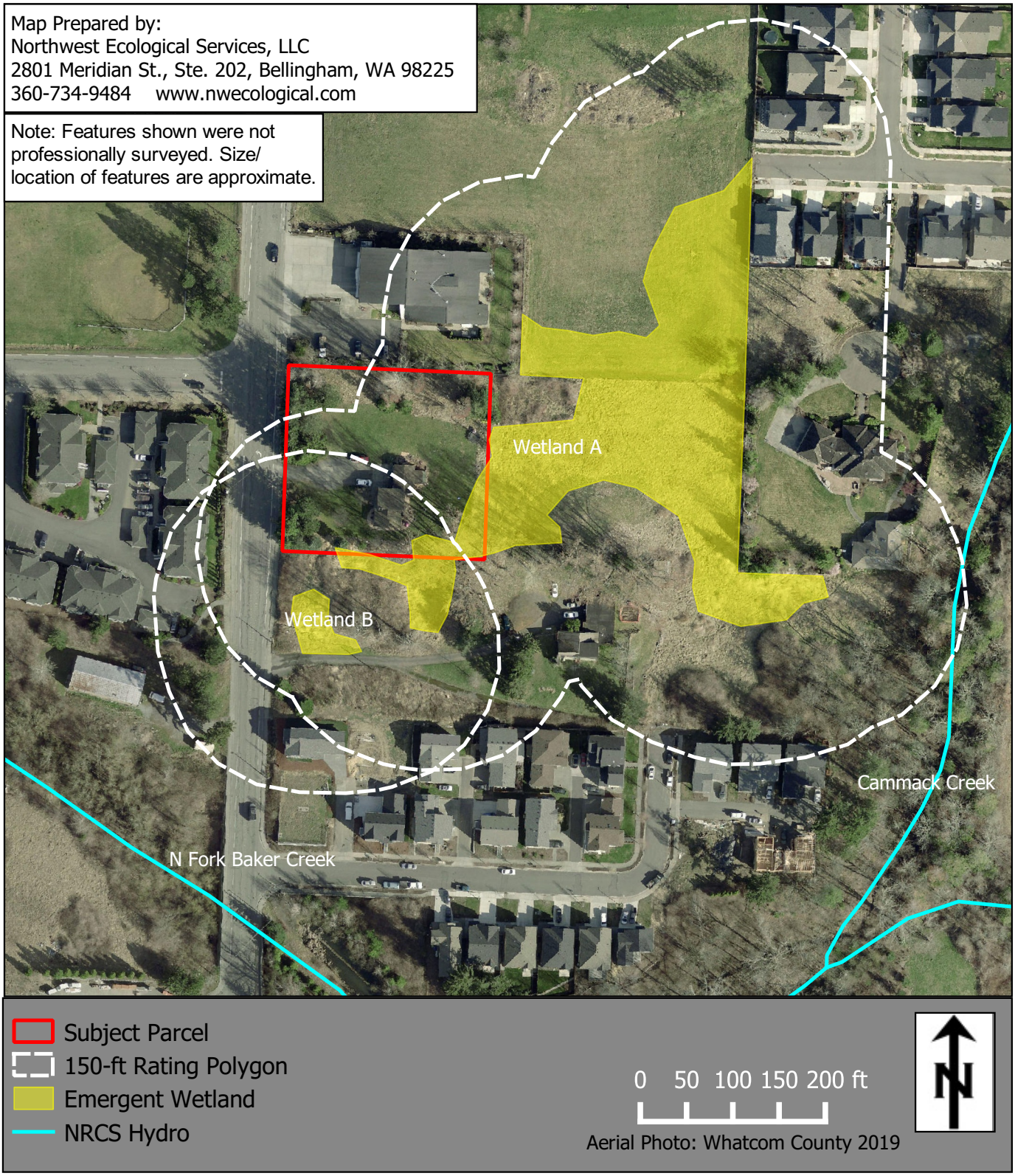
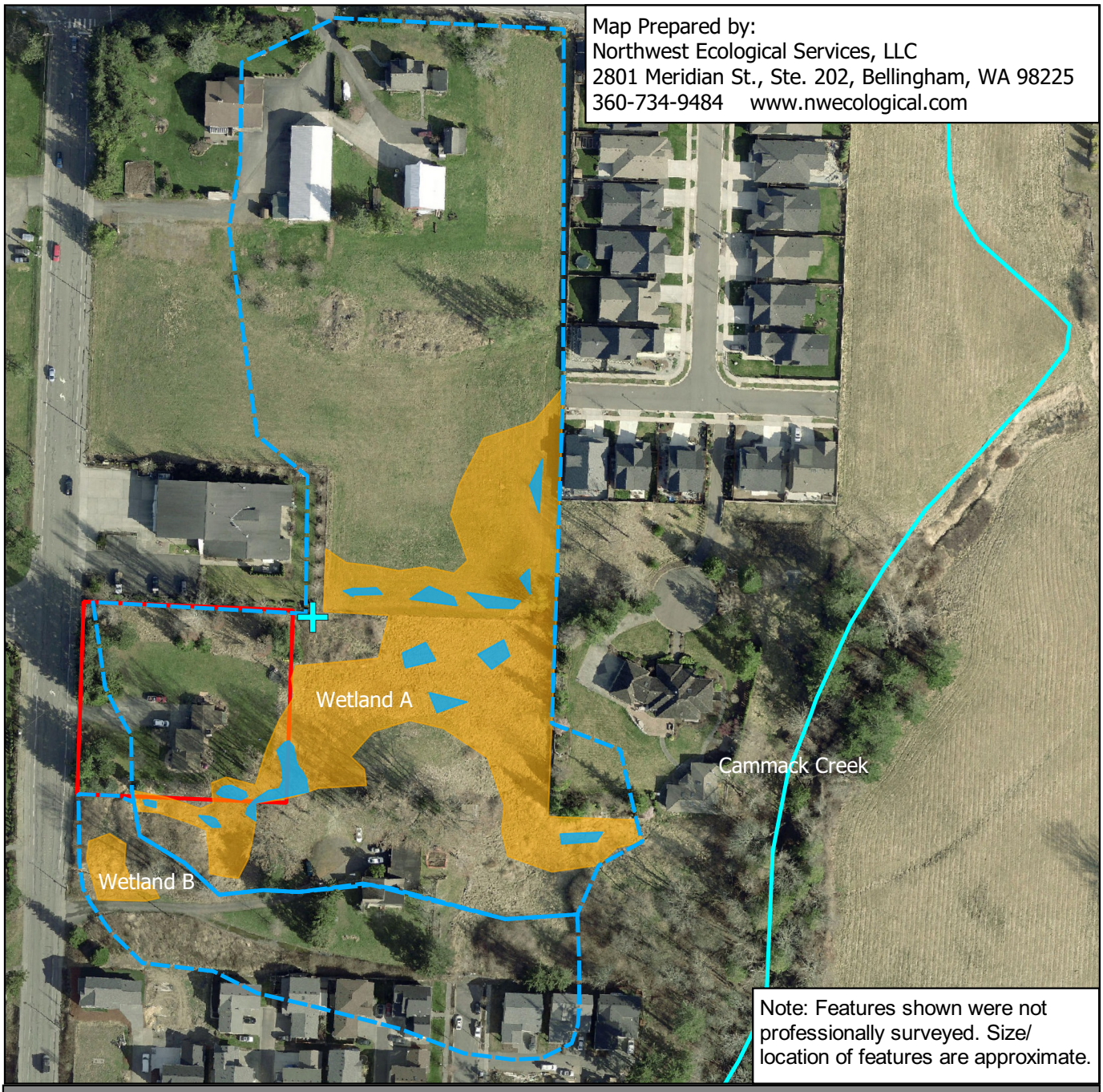
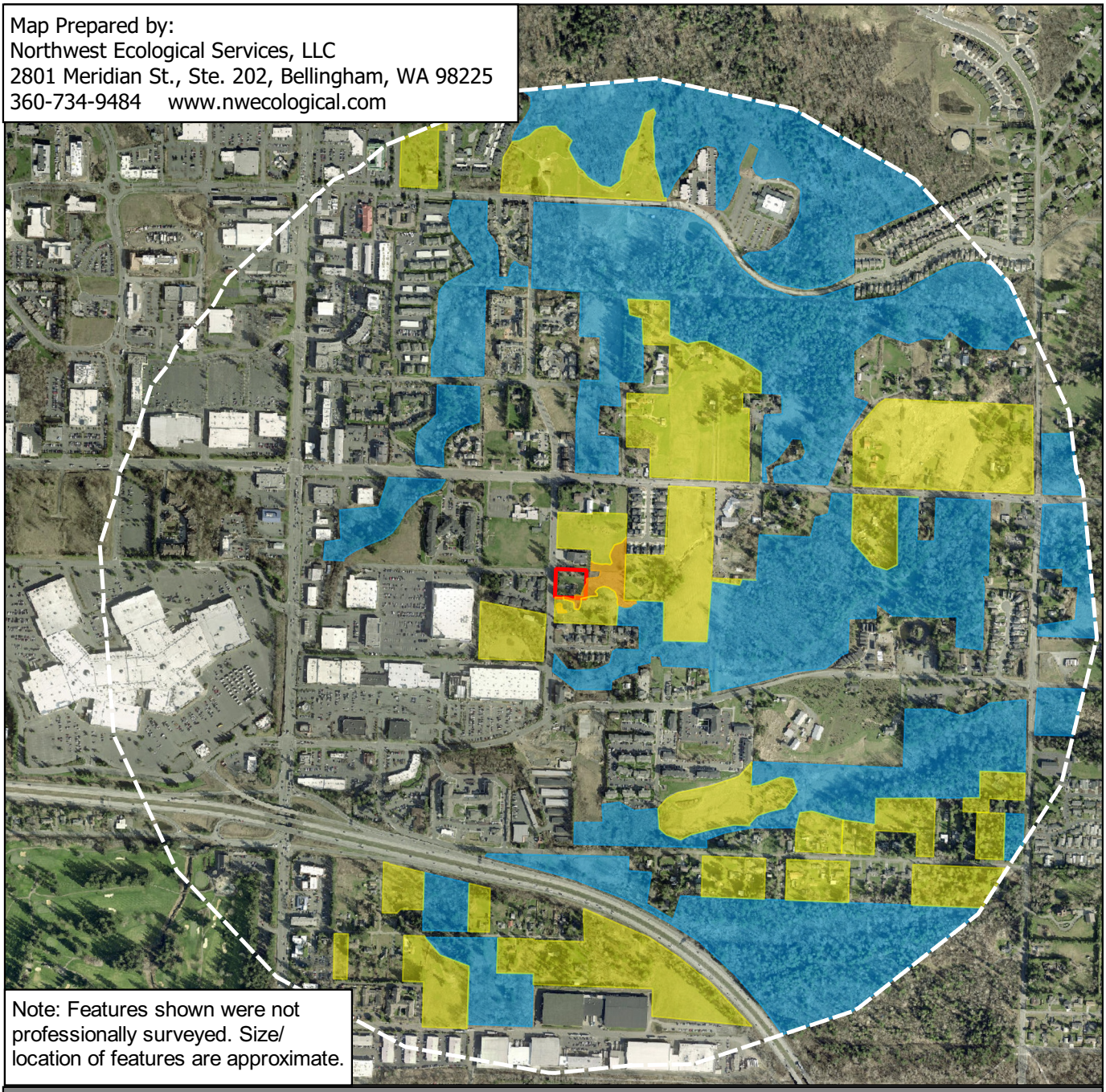


ECOLOGICAL NORTHWEST	**Wetland Rating Map (Vegetation Map)** **4056 Deemer Road - Parcel #380318 195488** **Critical Areas Assessment**	**Attachment A** **FEB 2022**



Ecological Northwest	**Wetland Rating Map (Hydrology Map)** **4056 Deemer Road - Parcel #380318 195488** **Critical Areas Assessment**	**Attachment B** **FEB 2022**

Map Prepared by:
Northwest Ecological Services, LLC
2801 Meridian St., Ste. 202, Bellingham, WA 98225
360-734-9484 www.nwecological.com



Note: Features shown were not professionally surveyed. Size/ location of features are approximate.

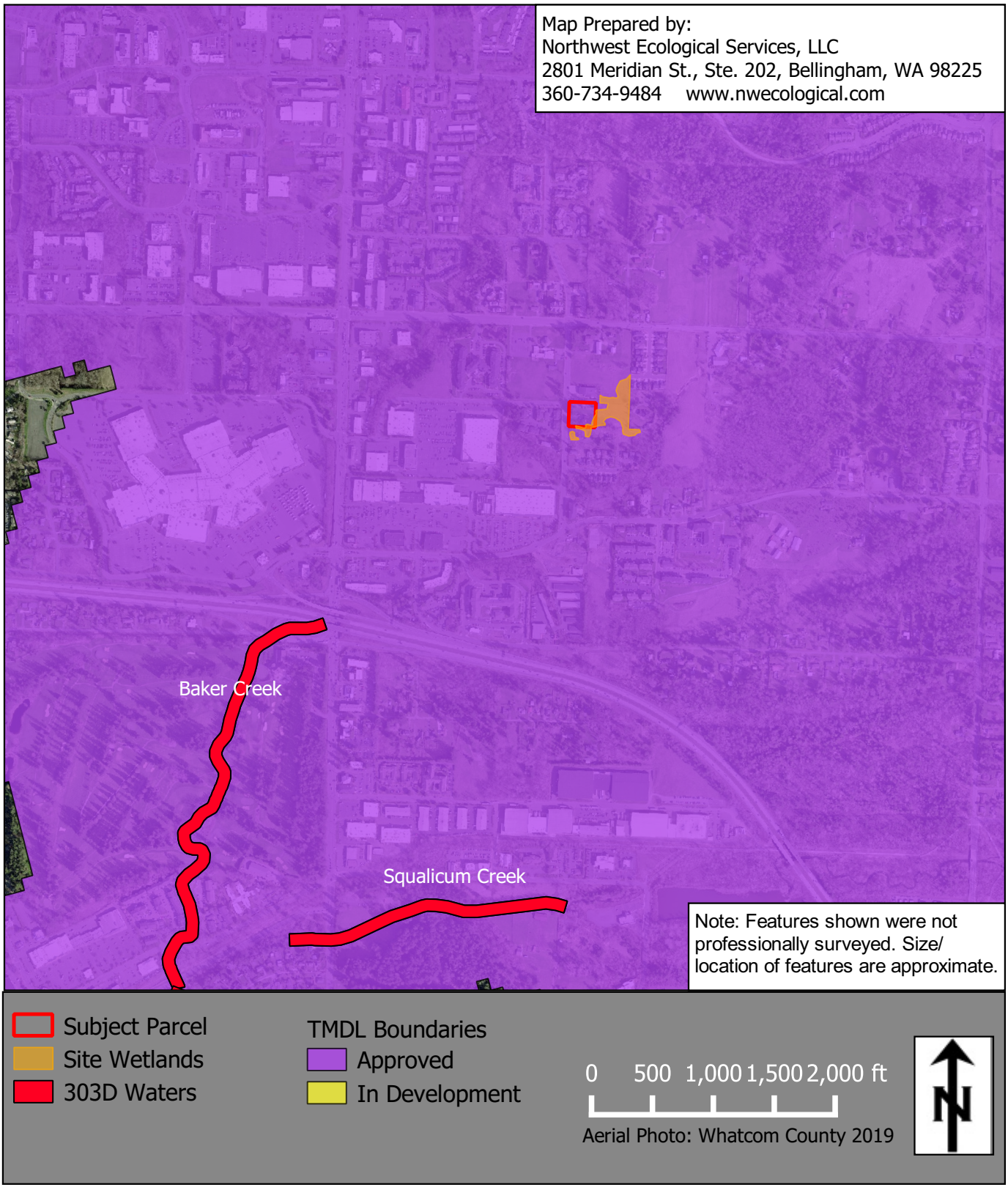
Subject Parcel
1-km Rating Polygon
Site Wetlands
Relatively Undisturbed
Moderately Disturbed

0 500 1,000 1,500 2,000 ft

Aerial Photo: Whatcom County 2019

N

Ecological Northwest	**Wetland Rating Map (Land Use Map)** **4056 Deemer Road - Parcel #380318 195488** **Critical Areas Assessment**	**Attachment C** **FEB 2022**



Ecological Northwest	**Wetland Rating Map (Water Quality Map)** **4056 Deemer Road - Parcel #380318 195488** **Critical Areas Assessment**	**Attachment D** **FEB 2022**

Exhibit D



IMPACT ASSESSMENT & MITIGATION PLAN

DEEMER ROAD TOWNHOMES
PARCEL 380318 195488
BELLINGHAM, WA

JANUARY 2024

NW ECOLOGICAL SERVICES
2801 Meridian St, Suite 202, Bellingham, WA 98225
nwecological.com | t 360.734.9484

EXECUTIVE SUMMARY

Northwest Ecological Services, LLC (NES) was retained to prepare an impact assessment and mitigation plan for a proposed multi-family residential project known as Deemer Road Townhomes at 4056 Deemer Road (Parcel 380318 195488) in the City of Bellingham, Washington. This report describes existing conditions, analyzes proposed impacts, and presents mitigating actions based on the current design that will maintain, protect and/or enhance existing wetland habitat and associated buffer functions in accordance with applicable environmental regulations.

All information contained in this report is based on available information and site conditions at the time of the site visits. This report is intended for inclusion with future development permit submissions to the City of Bellingham (COB).

NES completed a critical areas assessment report to document site conditions in February of 2022. One wetland (Wetland A) was identified within the subject site, as well as an additional offsite wetland (Wetland B) within the vicinity of the subject parcel. Under the Ecology 2014 Rating System, Wetland A is a Category III wetland and Wetland B is a Category IV wetland. The COB critical areas ordinance (CAO) requires buffers on regulated features. Both Wetland A and B are regulated by COB. Per BMC 16.55.340B, for a high intensity land use, Wetland A is expected to receive a standard buffer of 80 feet and Wetland B is expected to receive a buffer of 50 feet.

The proposed project includes the construction of seven single-family townhomes north of the existing single-family home. The project also includes shared driveway access and sidewalks.

Wetland A and its associated 80-foot buffer extend across most of the southeastern portion of the site, making impacts unavoidable if development is to occur on site at a feasible density. The majority of the proposed project is located outside of any critical areas and no direct wetland impacts are proposed. Due to the constrained site conditions, the project includes approximately 2,900 square feet (sq. ft.) of buffer reduction within the buffer associated with Wetland A.

To compensate for buffer impacts and ensure no net loss of buffer function, compensatory mitigation is proposed in the form of onsite buffer enhancement. Mitigation actions include 10,360 sq. ft. of buffer enhancement between the proposed development and Wetland A, 3,700 sq. ft. of additional planting to bring the remainder of the buffer up to a forested standard per Code, and installation of signage and split rail fence for site protection. Enhancements include the removal of non-native plant material and subsequent installation of native tree, shrubs, and/or groundcover in areas that are currently mowed lawn.

Maintenance and monitoring of the mitigation project shall be provided for a minimum of five years after the as-built report is approved, to determine project success. A conservation easement will be filed to protect the mitigation from future development.

NES QUALIFICATIONS

NES is a specialized service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services to both the public and private sectors. Our services include wetland assessments, biological assessments, wetland restoration and mitigation plans, natural resource analysis, environmental regulatory compliance, landscape and ecological design, and environmental impact assessment of plants, animals, fish and sensitive habitats. NES professionals have performed wetland and biological assessment over 35,000 acres [1991-2022] in Whatcom, Skagit, Island, San Juan, Snohomish and King Counties.

NES staff qualifications summary:

- Molly Porter is an ecologist with NES and has provided environmental services within the north Puget Sound area since 2004. Ms. Porter obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. She is certified through SWS as a PWS, #2064.
- Collin Van Slyke is an ecologist with NES, providing environmental services for projects throughout north Puget Sound. Mr. Van Slyke obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at WWU. He is certified through SWS as a PWS, #3129.
- Candice Trusty is an ecologist with NES and has been providing environmental services within the north Puget Sound since 2019. Ms. Trusty obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. Her experience includes the assessment of wetland and fish & wildlife critical areas, fish removal, biological surveying, and habitat restoration. She is certified through SWS as a WPIT.
- Michael Whitehurst is an ecologist with NES. Mr. Whitehurst obtained a Bachelor of Science in Marine Biology from the University of West Florida and certificate in wetland science and management from the University of Washington. His experience includes marine and freshwater organism identification, marine and terrestrial botany, and water quality sampling and analysis.

DISCLAIMER

Wetland, stream, and lake delineations and determinations are based upon protocols defined in manuals and publications produced by federal, state and local agencies. The wetland methodology used in this report is consistent with methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast* Region (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as required by WAC 173-22-035. The findings were based on observations of conditions at the time of the site visit(s).

Mitigation plans are developed to meet local, state, and federal regulations. This plan requires agency concurrence prior to implementation. The recommendations are based on conditions at the time of the site visit and development plans provided by the Client and Client representatives. Although the plan is carefully designed to facilitate success, no guarantees are given that the project will meet all performance standards. Project success depends on many unforeseen and uncontrollable events, achieving success can be greatly improved through:

- Ensuring a qualified ecologist is on site during mitigation project construction,
- Installing the mitigation project as specified in this report,
- Maintaining the mitigation project as specified in this report (ideally by a landscape professional that specializes in restoration and/or wetland mitigation), and
- Implementing any recommended contingency measures in a timely manner.

This report is provided for the use and named recipient only and is not intended for use by other parties for any purpose. This report does not guarantee agency concurrence or permit approval.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Scope of Work

Northwest Ecological Services, LLC (NES) was retained to prepare an impact assessment and mitigation plan for a proposed multi-family residential project in the city of Bellingham Washington. This report describes existing conditions, analyzes proposed impacts, and presents mitigating actions based on the current design that will maintain, protect and/or enhance existing wetland habitat and associated buffer functions in accordance with applicable environmental regulations.

All information contained in this report is based on available information and site conditions at the time of the site visits. This report is intended for inclusion with future development permit submissions to the City of Bellingham (COB).

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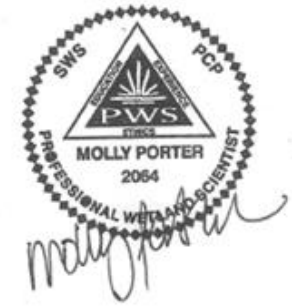

1.2 Project Location and Background

The project is located at 4056 Deemer Road (Parcel 380318 195488) within the city limits of Bellingham, Washington (Section 18, Township 38N, Range 03E W.M.) (Figure 1-all referenced figures are located in Appendix B). The site is currently accessed via a single-family home driveway from Deemer Road.

NES prepared a mitigation plan for the proposed project in 2023, but the site plan has been revised since that time. Changes include elimination of the proposed accessory dwelling unit attached to the single-family home, and re-configuration of the proposed townhomes and site access. Overall, the proposed buffer impact is significantly less than it was with the prior site plan. This plan completely replaces the plan drafted in 2023.

1.3 Project Overview

The proposed project includes the construction of seven townhomes north of the existing single-family home, and a new, shared driveway. The site plan is detailed in Figure 4 and includes the following elements:

- Townhomes. Seven townhomes are proposed in the northwestern portion of the site. Shared walkways will connect the homes to the sidewalk along Deemer Road or new shared sidewalks internally.
- Access/ Parking. The proposed site plan includes the addition of a new, shared site access driveway from Deemer Road into the northern portion of the parcel. A T-shaped firetruck turnaround overlaps with the access. Parking will be provided either in a garage or in front of each unit.
- Stormwater and Sewer. On-site stormwater treatment and detention shall occur in accordance with the 2019 Ecology Stormwater Management Manual for Western Washington and COB Municipal Code. A stormwater catchment and treatment/ detention vault will be installed just south of the driveway and will connect to existing stormwater facilities along Deemer Road.
- Impacts. No direct wetland impacts are proposed. However, due to the constrained site conditions, complete avoidance of the buffer is not possible if the development is to occur onsite at the proposed density. The project includes 2,900 sq. ft. of new buffer encroachment.
- Mitigation. Compensatory mitigation is proposed in the form of 10,360 sq. ft. of onsite buffer enhancement. Additionally, another 3,700 sq. ft. of planting is proposed in order to bring the remainder of the buffer up to the forested standard as required by COB Code. Long term protection includes fencing, Native Growth Protection Area (NGPA) signage, and a conservation easement.

2.0 BACKGROUND

NES performed a critical areas assessment of this site in February of 2022. The following descriptions are based on the 2022 report.

2.1 Existing Conditions

Deemer Road borders the western boundary of the subject parcel. A private driveway provides access from Deemer Road to the single-family residence, attached garage, and gravel parking areas. The parcel is mostly flat, with site topography sloping slightly north to south at one percent grade. The majority of the parcel is vegetated with mowed lawn, but a number of native and ornamental trees are planted in rows along the parcel boundaries.

2.2 Wetlands

NES identified one wetland (Wetland A) within the subject site, and one additional wetland (Wetland B) offsite to south of the subject parcel (Figures 2 and 3).

The identified wetlands are summarized in Table 1. For a full description of the site wetlands see the 2022 critical areas report (NES, 2022).

Table 1. Wetland Classification Summary

Wetland	Hydrogeomorphic Class	Cowardin Classification	Approximate Size (acres)*
Wetland A	Depressional	PEM	1.85
Wetland B	Depressional	PEM	0.07

(P: Palustrine, EM: emergent) *Total size approximated including off-site extent.

2.3 Habitat Conservation Areas (HCAs)

Streams

No streams or lakes are mapped or were observed within the immediate vicinity of the review area.

Fish & Wildlife

The occurrence of little brown bat (*Myotis lucifugus*) is mapped within the subject site; however, this mapping is at a township level rather than site specific and habitat for this species is not present onsite.

No other threatened, endangered, or candidate species or associated habitats (other than the wetlands) were observed in the vicinity of the review area during the site visit.

Overall, the site contains little habitat suitable for wildlife species due to limited habitat structure and complexity. Nearby areas offsite contain some suitable habitat for wildlife species that occupy urban habitats including deer, songbirds, and small mammals. However, usage of the site is likely to be limited to species that can tolerate urban environments due to surrounding development including roads and dense urban residential housing. Habitat is also limited by invasive vegetation, including Himalayan blackberry (*Rubus armeniacus*) and reed canarygrass (*Phalaris arundianacea*). However, the site is adjacent to a protected forested block (FR-157) along Cammack Creek and North Fork Baker Creek, that likely serves as a habitat corridor for wildlife.

2.4 Frequently Flooded Areas

No frequently flooded areas are mapped onsite.

2.5 Shorelines

The site is outside of the COB Shoreline Master Program (SMP) jurisdiction.

2.6 Regulatory Summary

Agencies with regulatory authority over site wetlands, streams, fish and wildlife habitats, shorelines, and/or frequently flooded areas are summarized in Table 2 below.

Table 2. Critical Areas Summary

Feature	2014 Ecology Category	Regulatory Authority				Regulated Buffer (ft) *
		COB	Corps	Ecology	WDFW	
Wetland A	III	X	X	X		80
Wetland B	IV	X		X		50

* High intensity buffer

3.0 IMPACT ASSESSMENT

3.1 Proposed Project

As described in Section 1.3, The proposed project includes the construction of seven single-townhomes and associated amenities (Figure 4). Development is concentrated in the northwestern portion of the review area, with proposed mitigation areas in the east and southern portions of the property.

3.2 Proposed Critical Areas Impacts

The majority of the proposed project is located outside of any critical areas or associated buffers. However, due to the constrained site conditions, complete avoidance of the buffer associated with Wetland A is not possible if the development is to occur onsite at the proposed density. The project seeks to provide much needed housing within City limits and promotes infill in an already dense residential/ commercial area.

Proposed impacts are described below and are shown in Figure 5.

3.2.1 Wetland Impact

No direct wetland impacts are proposed.

3.2.2 Buffer Impact

The project includes approximately **2,900 sq. ft. of buffer encroachment** within the buffer of Wetland A. Most of the proposed reduction does not extend beyond the 25 percent reduction allowed. However, in a few areas a reduction beyond 25 percent is necessary due to the location of existing infrastructure (home and driveway) in relation to site wetlands. The existing home and driveway are already closer to the wetland than the standard buffer reduction would allow, and the location of these features drives the proposed site configuration and the needed additional buffer impact. Because of this additional buffer

reduction, we have proposed a greater than standard (1:1) mitigation ratio in order to protect the adjacent wetlands and wetland/ buffer functions, see below.

As part of the buffer reduction, the project also seeks to modify the standard 15-ft building setback around the existing home. It will be reduced to the south, where the existing home is close to the wetland, and will be increased slightly to the southeast to allow for a small yard adjacent to the home, off of the back porch.

3.3 Impact Analysis

The following sections provide an analysis of proposed impacts to the functional components of Wetland A and its associated buffer.

3.3.1 Water Quality Improvement/ Run-off Filtration

Existing Condition:

In general, Wetland A has moderate potential to perform water quality functions. Wetland A contains depressional areas, which allows for the settling out of particulates and increased treatment time of impounded waters. Wetland A also contains dense vegetation cover capable of providing runoff filtration and pollutant uptake. However, the wetland lacks woody material that could further increase water quality functions. Wetland A is located proximally to areas of dense urban development which have the potential to discharge pollutants into the wetland.

The review area is located within the Baker Creek sub-basin, a 303d listed water which has a TMDL for temperature. Therefore, the water quality improvement functions provided by the subject wetlands are of value.

The wetland buffer within the project area is composed largely of mowed grass that likely does little to provide additional filtration and water quality improvement of surface runoff prior to flowing into Wetland A.

Potential Impact:

The proposed project has the potential to result in a reduction of the water quality improvement function due to proposed buffer reduction and an increase in impervious surfaces on site.

As with all projects, temporary disturbances from clearing and grading have the potential to increase turbidity during construction. Construction best management practices (BMPs) and temporary erosion and sediment control (TESC) measures are expected to minimize the potential for temporary erosion and sedimentation.

Mitigated Determination:

Any water quality impacts are anticipated to be offset through the proposed stormwater treatment facility and enhancement plantings within the buffer. The project includes both stormwater controls and the addition of native trees and shrubs within the buffer to increase year-round water quality improvement functions.

Mitigation through enhancement to site buffers is proposed in degraded areas where water quality filtration and improvement functions are limited due to their current condition as

maintained lawn. Increased woody vegetation in these areas is anticipated to improve water quality through interception, evapotranspiration, and temperature moderation. These processes serve to retain, detain, cool water, and reduce /filter pollutants in runoff. Greater vegetation structure increases potential within the buffer to detain and cleanse runoff.

Therefore, with the proposed stormwater treatment and mitigation plantings, no net loss of water quality functions provided by the site are anticipated.

3.3.2 Hydrology Function Impact

Existing Condition:

Wetland A has moderate potential to perform hydrologic functions. The wetland appears to receive runoff from surrounding development and ponding within the wetland provides some live storage during rain events. Wetland A appears to outlet to North Fork Baker Creek, a tributary of Squalicum Creek, which has documented down-stream surface flooding problems. Therefore, the hydrologic functions provided by Wetland A are of value.

Current best available science (BAS) does not provide clear evidence that wetland buffers protect the hydrologic functions within wetlands, since many of these functions are controlled at a larger landscape scale (Sheldon et al., 2005 and Hruby, 2013).

Potential Impact:

No wetland fill is proposed. Stormwater runoff from the proposed development will be directed to a stormwater system which will provide required treatment and detention. Therefore no measurable impacts to wetland hydrology are anticipated.

Mitigated Determination:

The installation of additional woody vegetation within the wetland buffer will increase hydrology functions of the buffer through rainwater interception, water uptake within plant biomass, and ability to slow surface flows during flood events.

Therefore, with the proposed stormwater treatment and mitigation plantings, no net loss of hydrology functions provided by the site are anticipated.

3.3.3 Fish and Wildlife Function Impact

Existing Condition:
Wetland A has low potential to provide habitat functions. The structural and native species within Wetland A and the buffer are lacking. No habitat features are present. The wetland also contains a high percentage of cover of invasive species. Wetland A is separated from other undeveloped habitat areas by roads and urban development. However, a forest block located east, along Cammack Creek and North Fork Baker Creek may provide habitat connectivity to the site.

The buffer within the proposed project area is largely composed of maintained lawn, offering little in terms of potential habitat and wildlife usage.

Potential Impact:

A minor reduction in wildlife habitat function is anticipated to result from the proposed project due buffer reductions and increased human presence on site. The impact is anticipated to be limited due to the existing, degraded conditions of the buffer onsite.

Mitigated Determination:

Impacted habitat functions will be replaced onsite through buffer enhancement. The planting of native trees, shrubs, and/or herbaceous material in the buffer is anticipated to increase native biodiversity, structure, and provide habitat for a wider range of wildlife. These plantings will also provide screening between the built environment and retained critical areas once established. The proposed mitigation is also diagonal to another mitigation area south of Woodbury Way, and the addition of the two sites starts to form a habitat block in this local area that could be used as refuge for wildlife.

Therefore, with the proposed mitigation plantings, no net loss of wildlife habitat provided by the site is anticipated.

3.3.4 Cumulative Impacts

Development throughout the city of Bellingham has the potential to result in cumulative impacts through the aggregation of many small projects/ impacts. Such impacts may include water quality issues downstream within the watershed, loss of live storage resulting in an increased risk of damage due to flooding, and habitat fragmentation.

The project site is located within the Baker Creek sub-basin, a 303d listed water that drains to Squalicum Creek. Almost all reaches of Squalicum Creek, and many tributaries contain some level of pollution for multiple parameters including dissolved oxygen, temperature and fecal coliform. The downstream reaches of Squalicum Creek have low pH, dissolved oxygen (DO), and bacteria impairments. These impairments tend to arise as water accumulates lower in the watershed. Therefore, it is important to maintain water quality on a site-by-site basis through the entire basin.

As described above, the project does not include any direct wetland impacts and complies with all applicable storm water requirements, implementing a stormwater control and treatment system. Additionally, the proposed enhancement is expected to increase overall water quality improvement function within the onsite buffer which will offset any additional pollutant generating surfaces associated with increased development onsite. Therefore, the project is not anticipated to significantly contribute to cumulative water quality issues present in the basin or reduce potential stormwater storage within Wetland A.

One of the primary concerns with development within the COB is the potential to result in habitat fragmentation through the removal of habitat and severance of migration routes or wildlife corridors. The proposed project is not expected to contribute to habitat fragmentation. Habitat within the project area is already limited and low functioning due to its location within a highly developed urban landscape. Development will be concentrated in the northwestern corner of the parcel, adjacent to Deemer Road. Mitigation onsite will be contiguous with relatively undisturbed areas offsite to the east and no habitat fragmentation is expected to

result. Mitigation through buffer enhancement is presented along the eastern boundary, which partially connects to another mitigation area south of Woodbury Way and starts to form a local habitat corridor here. Onsite enhancement plantings are anticipated to compensate for any loss of habitat due to the proposed buffer reduction and provide visual/auditory screening between the retained critical areas and built environment once established.

3.3.5 Impact Summary

Overall, with the proposed mitigation and stormwater treatment, no significant reduction to water quality, hydrologic, and habitat functions, or cumulative impacts are anticipated to result from the proposed project. The proposed mitigation is intended to maintain these functions at or above the current condition.

4.0 MITIGATION

The wetlands associated with the proposed project are under the regulatory authority of one or more permitting agencies (COB, Ecology, and Corps). The following section describes mitigating actions that have been proposed to compensate for any loss of buffer functions. The mitigation plan has been designed to meet the COB CAO and the Corps and Ecology's Wetland Mitigation in Washington State guidance document (WDOE, 2021) to the greatest extent possible.

4.1 Mitigation Sequencing and Alternatives Analysis

All permitting agencies require that projects demonstrate adherence to a specific sequence of actions termed "mitigation sequencing" before impacting wetlands, streams, or the buffers. Mitigation sequencing is a process where applicants show they have avoided all impacts to regulated areas and their buffers to the furthest extent possible. In some cases, if alteration to the regulated critical area is deemed unavoidable, impacts may be allowed if all adverse impacts resulting from a development proposal are mitigated using best available science so as to result in no net loss of critical area functions and values. When alteration or impact to a regulated area is proposed, the applicant must demonstrate that all reasonable efforts have been taken to mitigate impacts in the following prioritized order: 1) Avoid, 2) Minimize, 3) Rectify, 4) Reduce, 5) Compensate.

The following is a description of how the project has been designed to follow each mitigation sequencing element:

Avoid

- The proposed project avoids all direct impacts to wetlands.
- More than half of the site is encumbered by associated buffers. Complete avoidance of the buffer is not possible if development is to occur on site and achieve the required density needed for project feasibility.

Minimize

- The bulk of the project is located in the northwestern portion of the subject parcel, as far from site wetlands as possible.
- The proposed project meets the density requirements, avoids direct impacts to critical areas, and minimizes buffer impacts to the greatest extent practicable while achieving the intent and goals of the project.
- In order to further minimize impacts to the buffer, the number of units could be reduced, or the subject site could remain undeveloped. To completely avoid a buffer reduction, the number of units would need to be reduced from seven to potentially four. A reduction of this scale would make the project not financially feasible, and not meet the goal of providing needed housing in the City.
- The project adheres to the goals of the Washington State Growth Management Act by increasing housing density within City limits to avoid suburban sprawl. The demand for housing is high in the surrounding area. The proposed project is believed to be necessary to meet the needs of the community while being minimally environmentally impactful.
- The footprints of the proposed residences are consistent or smaller than housing in the surrounding neighborhood.
- Most of the proposed buffer reduction does not extend beyond the 25 percent standard reduction allowed in Code. However, in a few areas a reduction beyond 25 percent is necessary due to the location of existing infrastructure (home and driveway) in relation to site wetlands. This area already contains developed surfaces and mowed grass, providing very limited buffer function. The existing home and driveway are already closer to the wetland than the standard buffer reduction would allow, and the location of these features drives the proposed site configuration and the additional buffer impact. Because of this additional buffer reduction, we have proposed a greater than standard (1:1) mitigation ratio in order to protect the adjacent wetlands and wetland/ buffer functions, see below.
- Consistent with the buffer reduction criteria detailed in BMC 16.55.340.C.2.e, all reasonable measures will be employed to reduce the adverse impacts and ensure no new loss of buffer functions and values by the following:
  - All exterior lighting will be directed away from the wetland and the retained buffer.
  - The proposed mitigation is expected to provide screening between the development and retained wetland and buffer.
  - Stormwater will be treated and detained per Ecology/ COB requirements.
  - The retained buffer will be enhanced with native vegetation, as detailed below, and will be protected with fencing, signage, and a conservation easement.
  - Herbicides will only be used as directed by the project biologist.

- A permanent conservation easement will provide protection to the on-site portion of the retained wetland and buffer.

Rectify

- The project complies with City stormwater requirements.
- The project shall adhere to BMPs during construction.

Reduce or Eliminate Through Preservation or Maintenance

- Stormwater facilities will be maintained.
- Fencing, signage and a conservation easement will protect the retained critical areas and their buffers in perpetuity.

Compensate

- To address the proposed buffer encroachment, compensatory mitigation is proposed in the form of buffer enhancement. Enhancement is proposed above the required mitigation to impact ratio, and additional planting is presented to bring the remainder of the buffer up to a forested standard as required by Code, see below.

4.2 Mitigation Site Selection

On-site mitigation was chosen as the most appropriate location based on guidance in the COB CAO and best professional judgment. The buffer enhancement areas will be located between the proposed development and critical areas in areas that will maximize functional improvement within the buffer (Figure 6).

4.3 Mitigation Strategy

The following provides a summary of the proposed on-site mitigation. Figure 6 depicts the mitigation areas. The proposed mitigation is intended to maintain the functions of the site wetland and buffer in order to offset impacts associated with the proposed buffer encroachment. **A total of 14,060 sq. ft. of enhancement is proposed**, which includes the following elements:

- Buffer Enhancement. A total of 10,360 sq. ft. of buffer enhancement will occur in order to offset the proposed 2,900 sq. ft. of buffer impact. Enhancements will include removal of any non-native vegetation and installation of native trees, shrubs, and/or herbaceous material.

  Because of the additional buffer reduction beyond 25% in a few localized areas, we have proposed a greater than standard (1:1) mitigation ratio. Additional dense planting in these areas is intended to protect the adjacent wetlands and result in no loss of wetland function. Buffer enhancement to impact ratios presented are 3.5:1.

- Forested Planting Area. An additional 3,700 sq. ft. of planting will occur in two areas of the retained buffer. City Code requires buffer to be in a forested condition, and

this is intended to bring these areas up to this standard. Trees and shrubs will be installed but generally at a lower density than in the enhancement areas.

- On-Site Protection. The following measures are proposed to ensure permanent protection of retained critical areas:
  - Approximately 370 linear feet of fencing will be installed between the developed areas on site and the remaining buffer and wetland (Figures 5 and 6).
  - Five native growth protection area (NGPA) signs shall be installed along the fencing, as shown in Figure 6.
  - A Conservation Easement encompassing the mitigation areas, and all onsite wetland and retained buffers will be established.

5.0 MITIGATION METHODS AND PROCEDURES

5.1 Contractor Qualifications

Actions and tasks defined in this Mitigation Plan (including site preparation and planting) shall be either:

1) Conducted by a qualified contractor that can demonstrate a minimum of five years of experience with restoration or wetland mitigation installation projects in Whatcom or Skagit County. They must be able to provide an on-site staff member that can identify native plants. Biological oversight is only needed by the project professional wetland scientist (PWS) as specified in this Mitigation Plan

OR

2) The contractor shall have a signed contract with NES or another PWS to provide oversight during all excavation, contouring, material placement, and plant installation activities.

5.2 Biological Construction Oversight

The general contractor shall contact NES or the project PWS prior to start of work. At a minimum, a PWS must be on-site for a pre-construction meeting prior to any work on site**.**

5.3 Site Preparation

Thorough site preparation is vital to project success. All site preparation tasks (mitigation or otherwise) must be conducted in coordination with NES or another qualified biologist. The following are the required construction tasks associated with the compensatory mitigation:

- **The general contractor shall notify NES or COB staff and schedule a pre-construction meeting prior to starting ANY work on the development or mitigation site.** Work includes but is not limited to earthwork, clearing, or BMP installation for the development site and/or mitigation sites.

- Construction Entrance/Stockpile Area. A construction entrance(s) and stock-pile location(s) shall be designated prior to construction and located outside of on-site wetlands and as far from the edge as possible.
- Construction Fence/Silt Fence. Construction work limits shall be clearly marked with orange construction fencing and silt fencing prior to clearing, grading, and/or excavation. Alternatively, the orange construction fence can be eliminated if the contractor installs an orange silt fence. The fences will help provide water quality protection and define the active work area. Fences must be removed once construction is complete, and erosion is stabilized. Compost and/or mulch berms may be used in some areas in lieu of silt fencing, but not construction fencing.

  During construction, if any disturbance occurs outside the work limits, NES shall be notified to make an assessment. The contractor, in coordination with NES, shall restore the disturbed area to naturally occurring grades with the goal of restoring pre-construction surface storm flows as much as possible and protecting soil conditions.
- Dry Conditions. Equipment use within the mitigation areas shall be conducted when soils are dry and precipitation events are minimal.
- Equipment Maintenance. Equipment shall be maintained in good working condition such that petroleum products or other harmful chemicals are not leaked into the mitigation area.
- BMPs. The contractor shall adhere to BMPs outlined in this mitigation plan and any other BMPs listed in the construction documents which may include, but are not limited to, silt fences, mulch or compost berms, straw rolls, temporary construction entrances, catch basin inserts, and tree protection.

5.4 Invasive Plant Control

Remove any invasive weeds from the planting area prior to plant installation. Cut and hand-remove the roots of Himalayan blackberry. Herbicide shall be applied in the fall prior to planting. **Application of all herbicides onsite shall be done by an individual licensed for aquatic application, with a solution registered for use in aquatic environments**.

For long term management, the applicant may remove additional Himalayan blackberry within the buffer outside of the enhancement area. Vegetation removal shall be limited to the invasive Himalayan blackberry. All efforts should be made to avoid native volunteer species and promote growth.

5.5 Mulch & Soil Amendments

All plant material shall be installed with wood chip mulch as detailed below.

- The installer shall apply mulch in a three (3)-foot diameter ring around all installed woody plant material in the buffer enhancement and wetland enhancement areas. Mulch shall be applied in a "donut" around each plant with a depth of six (6) inches at the center grading to a depth of three (3) inches at each edge.
- No mulch shall be placed within one (1) inch of the plant stems but shall cover the root balls to the maximum possible extent.
- Mulch shall consist of clean hogfuel, woodchips with greens, woodchips with no greens, or coarse shredded bark (no beauty bark or stump grindings).
- Woodchip size shall average between 1/4 and 1/2 inches thick and one (1) to three (3) inches long (thin cut pulp chips are ideal).
- Mulch must be clean, free of materials detrimental to plant health, and free of invasive plant seeds and soil.

Soil onsite, including the planting areas is highly compacted due to past clearing, grading, and land use. Plant survival and growth would be increased with soil decompaction. **Tilling of soil to a depth of 8-12 inches is recommended but not required.** If tilling occurs, avoid working within the driplines of existing trees.

5.6 Plant Installation

Installation Standards

- Installation must be done according to the agency-approved mitigation plan. Any changes must be approved by the project biologist.

Plant Installation Timing

- Preferred planting timing is during the dormant season (between October 15th and April 1st). Bare root material may only be used between December 1st and March 15th.
- If planting occurs outside of this window, additional care (watering) will be necessary to ensure plant survival.
- The contractor shall contact the project biologist to inspect plant material prior to installation.
- The contractor shall contact the project biologist **prior** to installation to consult on placement.

Source of Plant Material

- Plant material shall be obtained from native plant nurseries growing stock from the Puget Sound lowlands. When possible, obtain plants from a local, Whatcom or Skagit County nursery. **Provide the project biologist staff written documentation from the plant supplier verifying plant origination PRIOR to plant installation.**

- Any species substitutions must be approved by the project biologist.
- Container plants are preferred for this project, however **if bare-root stock is used the plants numbers should be increased by 20% to compensate for increased mortality.**

Planting Guidelines

- Remove all garbage and debris from planting areas.
- Actual planting shall follow the digging of holes as closely as possible to prevent drying excavated soil. Each plant shall be placed in a hole and backfilled with native soil. Backfill shall be tamped firmly to remove voids in soil. Excess soil shall be smoothed and firmed around plants leaving a slight depression to collect water.
- Installed plants shall be marked with flagging for identification. Flagging should be placed on a lateral stem to prevent girdling.
- All plants shall be watered immediately after planting unless soils are heavily wet.
- Mulch shall be installed around all plants per above specifications.
- After installation, the contractor shall coordinate with NES to schedule a site inspection to verify all plants were installed according to design and are in good health.

Actual size of plant material may vary depending on availability. Tables 3 and 4 detail the planting specifications for the mitigation areas.

Table 3. Planting Specifications for Buffer Enhancement Area (10,360 sq. ft.)

Scientific Name	Common Name	Condition	Grade (min.size)	Spacing	# Plants*
Trees *Pseudotsuga menziesii*	Douglas fir	C	18" minimum/ one gallon	15' OC	20
Betula papyrifera	Paper birch	C			10
Prunus emarginata	Bitter cherry	C			10
Shrubs *Acer circinatum*	Vine maple	C		6' OC	30
Corylus cornuta	Beaked hazelnut	C			15
Physocarpus capitatus	Pacific ninebark	C			30
Lonicera involucrate	Black twinberry	C			30
Symphoricarpos albus	Snowberry	C			60
Rosa nutkana	Nootka rose	C			50
Polystichum munitum	Sword fern	C		4' OC	40
				Total	**295**

OC = On-center, *based on use of container plants. If bare root stock is used, numbers should be increased by 20%

Table 4. Planting Specifications for the Forest Planting Area (3,700 sq. ft.)

Scientific Name	Common Name	Condition	Grade (min.size)	Spacing	# Plants*
Trees *Pseudotsuga menziesii*	Douglas fir	C	18" minimum/ one gallon	18' OC	5
Prunus emarginata	Bitter cherry				5
Shrubs *Acer circinatum*	Vine maple	C		8' OC	10
Symphoricarpos albus	Snowberry	C			10
Rosa nutkana	Nootka rose	C			10
				Total	**40**

OC = On-center, *based on use of container plants. If bare root stock is used, numbers should be increased by 20%

5.7 As-Built, Monitoring, and Maintenance

5.7.1 As-Built Documentation

After plant installation is complete, the contractor shall contact the project PWS to conduct an as-built inspection. An as-built report shall be provided to the City of Bellingham within 90 days after the planting phase of the project is complete. The as-built report shall be prepared by the project PWS; and the summary memorandum shall document where minor site design changes to the mitigation plan were necessary, the final planting schedule, and photographs.

The as-built shall include documentation of completion of the following tasks per this mitigation plan and project civil drawings:

- Installation of all plants and mulch
- Installation of fencing and signage
- Record of conservation easement

5.7.2 Monitoring

Monitoring shall occur annually for a five-year period following completion and acceptance of the as-built. A monitoring report will be produced for each sampling year by a qualified biologist. The monitoring report shall evaluate the project's success based on the project performance standards contained in this report. Data collected during monitoring visits will be summarized in a technical memo and provided to regulatory agencies no later than December 31st of each monitoring year.

Vegetation monitoring shall include qualitative (general site observations) data collection. Data in the monitoring report shall include at minimum:

- An overall qualitative assessment of plant material
- Percent survivorship and cover of installed plant material
- A species list of volunteer native species
- Species list and management recommendations for invasive plant cover
- An assessment of how the project is meeting mitigation goals
- Recommendations for any additional work or maintenance needed in order to meet project goals and/or performance standards.

The following are the goals, objectives, and performance standards for the compensatory mitigation. The following performance standards shall be used to measure project success during the five-year monitoring period.

Goal 1. Enhance the functions within the buffer of Wetland A.

Objective 1.1. Native trees and shrubs shall be installed throughout the wetland buffer, in areas shown conceptually in Figure 6.

Performance Standard 1a Vegetation in the buffer enhancement areas shall meet the vegetation cover or survival standards in Table 5. Survival in Year 1 is measured against the container quantity.

Table 5. Performance standards for installed vegetation in the Buffer Enhancement Area

Rated Item	Year 1	Year 2	Year 3	Year 4	Year 5	Long Term
Survival (%) (using container plant material quantity)	100	≥80				Natural Mortality
Mean % cover (trees+shrubs)	<5	>5	>20	>30	>50	80

Standard 1b Class A noxious weeds shall comprise no more than 5% of the woody plant community and no more than 10% of the herbaceous community. Class B and C noxious weeds shall cover no more than 10 percent of the vegetation within the wetland enhancement area. Weed classifications are based on the current Whatcom County Weed List by the Whatcom County Noxious Weed Control Board.

Goal 2. Preserve retained critical areas on site.

Objective 2.1. Preserve on-site mitigation areas by placing the areas under a protective conservation easement and installing critical areas signage and fencing.

Performance Standard 2a. Areas proposed for mitigation shall either be placed under a permanent conservation easement recorded at the Whatcom County Auditor's office prior to submittal of the as-built or a covenant or similar instrument shall be in place that protects the mitigation areas in perpetuity. Copies of the recorded document(s) shall be submitted to the COB.

Performance Standard 2b. Five NGPA signs and split rail fencing shall be installed between development and retained buffer as detailed in Figure 6. These features shall be maintained in good condition.

5.7.3 Long-Term Site Management

Once successfully installed the mitigation should be self-sustaining. No long-term maintenance of the mitigation area is anticipated at this time. Any necessary long-term management and maintenance recommendations shall be made in the final monitoring report.

5.8 Contingency Plans

If there is a significant problem with the mitigation achieving its performance standards, the project proponent shall work with NES or another qualified biologist to develop a Contingency Plan. Contingency Plans can include, but are not limited to: additional plant installation, erosion control, modifications to hydrology (excavation work), and plant substitutions of type, size, quantity, and location. Such Contingency Plan shall be submitted to applicable regulatory agencies by October 1st of any year when deficiencies are discovered.

5.9 Surety

As required by the City of Bellingham, a bond will be posted for 150% of the estimated construction costs of the mitigation plan. The following items are included in the bond amount for this project:

• Plants-installed: (335 plants x $7/plant)	$ 2,345.00
• Mulch-installed: (335 plants x $4/plant)	$ 1,340.00
• NGPA Sign (5 signs x $50)	$ 250.00
• Fencing (370 lf x $15/ft installed)	$ 5,550.00
• As-built Report	$ 675.00
• Monitoring (Year 1= $870, Years 2-5 = $725)	$3,770.00
• Maintenance ($500/ year for 5 years)	$ 2,500.00
subtotal	$ 16,430.00
x (50%)	$ 8,215.00
Total Bond:	**$ 24,645.00**

APPENDIX A: REFERENCES

References

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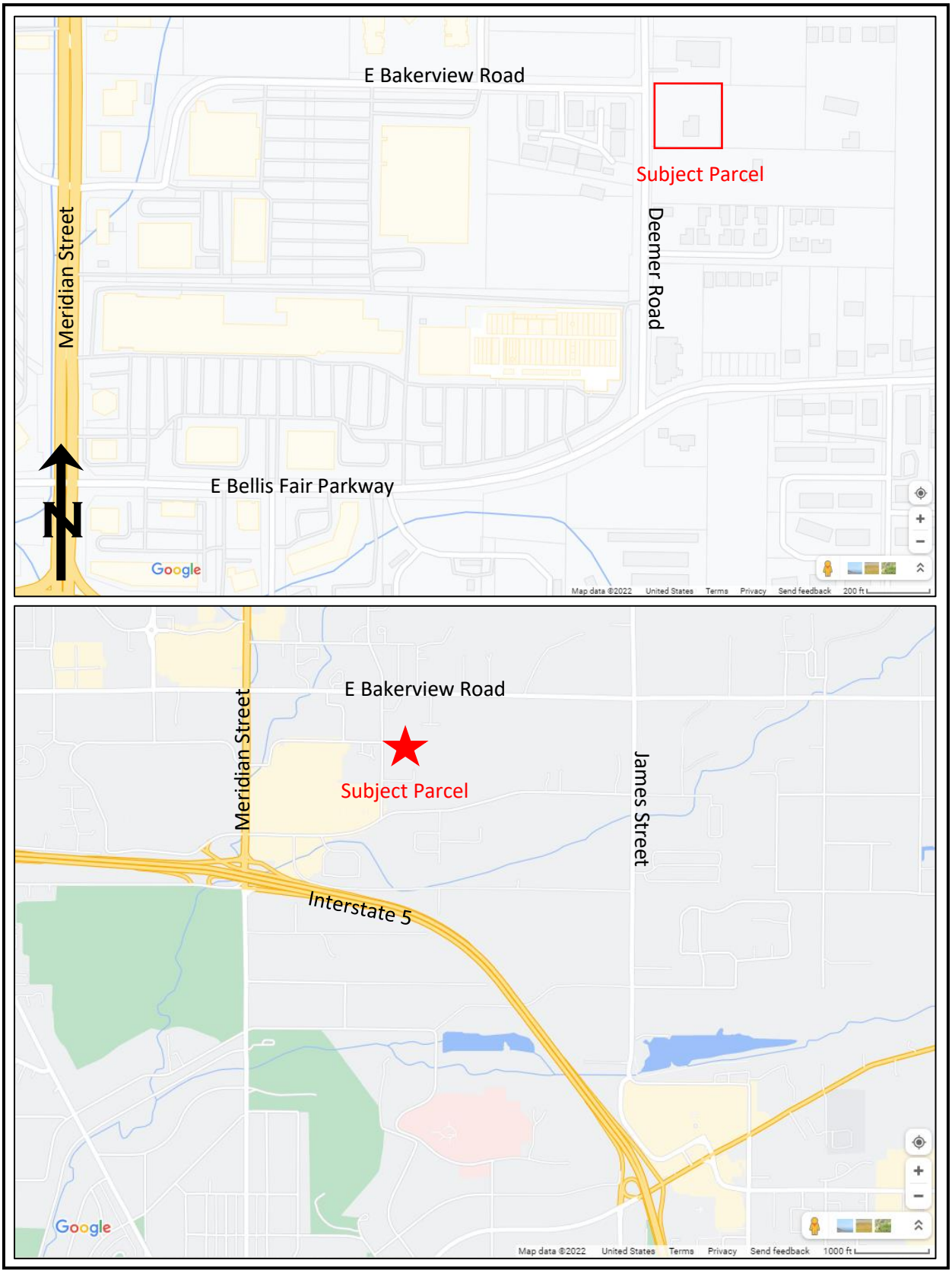
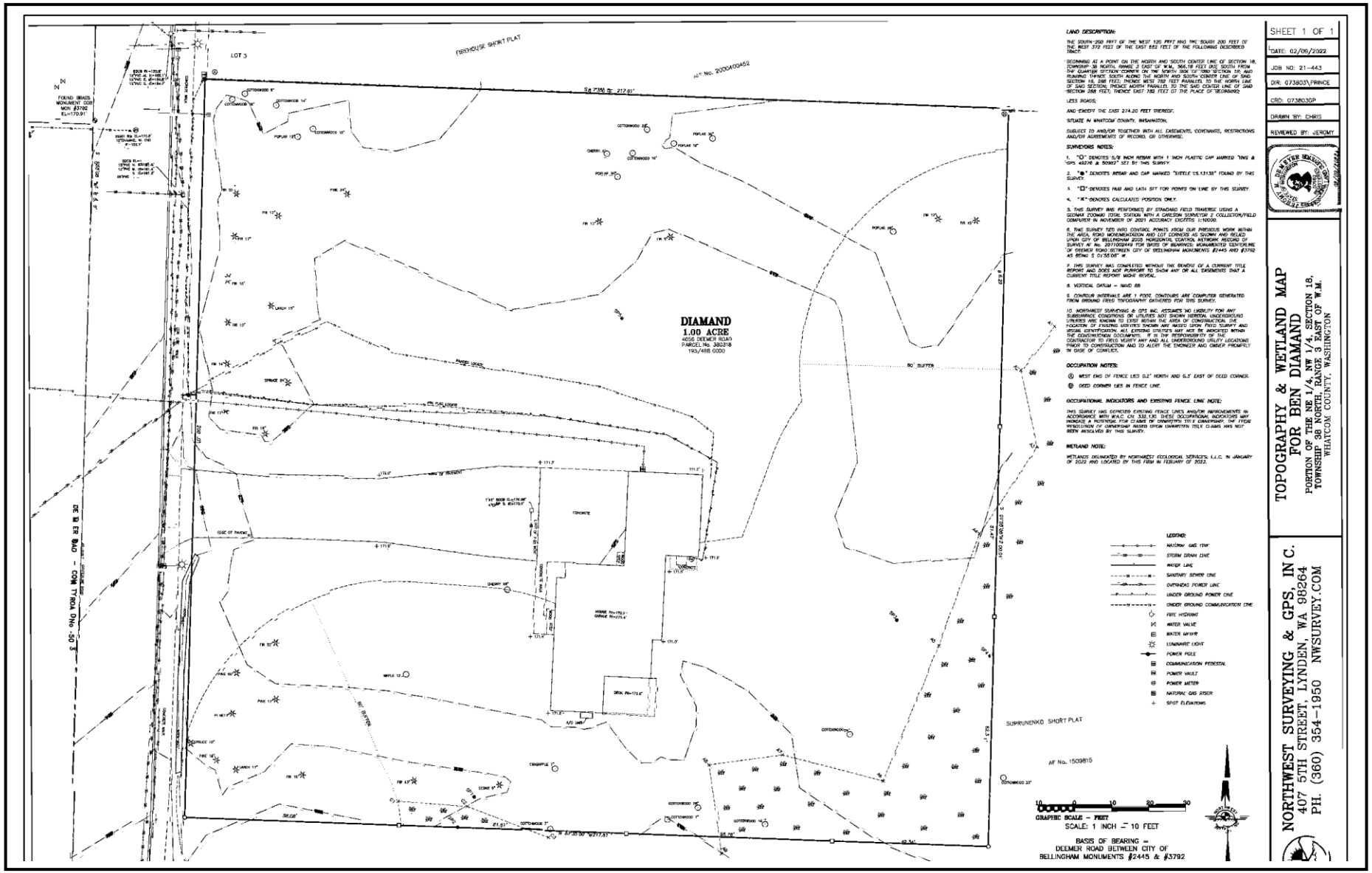
APPENDIX B: FIGURES



ECOLOGICAL NORTHWEST	**Vicinity Map** **(Google Maps)** **4056 Deemer Road** **Parcel #380318 195488** **Impact Assessment and Mitigation Plan**	**Figure 1** **JAN 2024**

Ecological Northwest	**Wetland Map** **4056 Deemer Road - Parcel #380318 195488** **Impact Assessment and Mitigation Plan**	**Figure 2** **JAN 2024**



LAND DESCRIPTION:

THE SOUTH 200 FEET OF THE WEST 120 FEET AND THE SOUTH 200 FEET OF THE WEST 372 FEET OF THE EAST 652 FEET OF THE FOLLOWING DESCRIBED TRACT:

BEGINNING AT A POINT ON THE NORTH AND SOUTH CENTER LINE OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 3 EAST OF W.M., 566.78 FEET DUE SOUTH FROM THE QUARTER SECTION CORNER ON THE NORTH SIDE OF SAID SECTION 18; AND RUNNING THENCE SOUTH ALONG THE NORTH AND SOUTH CENTER LINE OF SAID SECTION 18, 288 FEET; THENCE WEST 710 FEET PARALLEL TO THE NORTH LINE OF SAID SECTION; THENCE NORTH PARALLEL TO THE SAID CENTER LINE OF SAID SECTION 288 FEET; THENCE EAST 710 FEET OF THE PLACE OF BEGINNING;

LESS ROADS;

AND EXCEPT THE EAST 274.20 FEET THEREOF.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SUBJECT TO AND/OR TOGETHER WITH ALL EASEMENTS, COVENANTS, RESTRICTIONS AND/OR AGREEMENTS OF RECORD, OR OTHERWISE.

SURVEYORS NOTES:

1. "O" DENOTES 5/8 INCH REBAR WITH 1 INCH PLASTIC CAP MARKED "NWS & GPS 48276 & 50912" SET BY THIS SURVEY.
2. "●" DENOTES REBAR AND CAP MARKED "SVEDLE LS 13138" FOUND BY THIS SURVEY.
3. "□" DENOTES PAB AND LATH SET FOR POINTS ON LINE BY THIS SURVEY.
4. "(R)" DENOTES CALCULATED POSITION ONLY.
5. THIS SURVEY WAS PERFORMED BY STANDARD FIELD TRAVERSE USING A GEOMAX ZOOM80 TOTAL STATION WITH A CARLSON SURVEYOR 2 COLLECTOR/FIELD COMPUTER IN NOVEMBER OF 2021 ACCURACY EXCEEDS 1:10000.
6. THE SURVEY TIES HARD CONTROL POINTS FROM OUR PREVIOUS WORK WITHIN THE AREA, ROAD MONUMENTATION AND LOT CORNERS AS SHOWN AND HELD UPON CITY OF BELLINGHAM 2020 HORIZONTAL CONTROL NETWORK RECORD OF SURVEY AF No. 2071002449 FOR BASIS OF BEARINGS: MONUMENTED CENTERLINE OF DEEMER ROAD BETWEEN CITY OF BELLINGHAM MONUMENTS #2445 AND #3792 AS BEING S 01°55'08" W.
7. 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.
8. VERTICAL DATUM – NAVD 88
9. CONTOUR INTERVALS ARE 1 FOOT. CONTOURS ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY.
10. NORTHWEST SURVEYING & GPS INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR UTILITIES NOT SHOWN HEREON. UNDERGROUND UTILITIES ARE KNOWN TO EXIST WITHIN THE AREA OF CONSTRUCTION. 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 ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND TO ALERT THE ENGINEER AND OWNER PROMPTLY IN CASE OF CONFLICT.

OCCUPATION NOTES:

(A) WEST END OF FENCE LIES 0.2' NORTH AND 0.3' EAST OF DEED CORNER.
(B) DEED CORNER LIES IN FENCE LINE.

OCCUPATIONAL INDICATORS AND EXISTING FENCE LINE NOTE:

THIS SURVEY HAS DEPICTED EXISTING FENCE LINES AND/OR IMPROVEMENTS IN ACCORDANCE WITH W.A.C. ON 332-130. THESE OCCUPATIONAL INDICATORS MAY INDICATE A POTENTIAL FOR CLAIMS OF OWNERSHIP TITLE OWNERSHIP. THE TRUE RESOLUTION OF OWNERSHIP BASED UPON UNWRITTEN TITLE CLAIMS HAS NOT BEEN RESOLVED BY THIS SURVEY.

WETLAND NOTE:

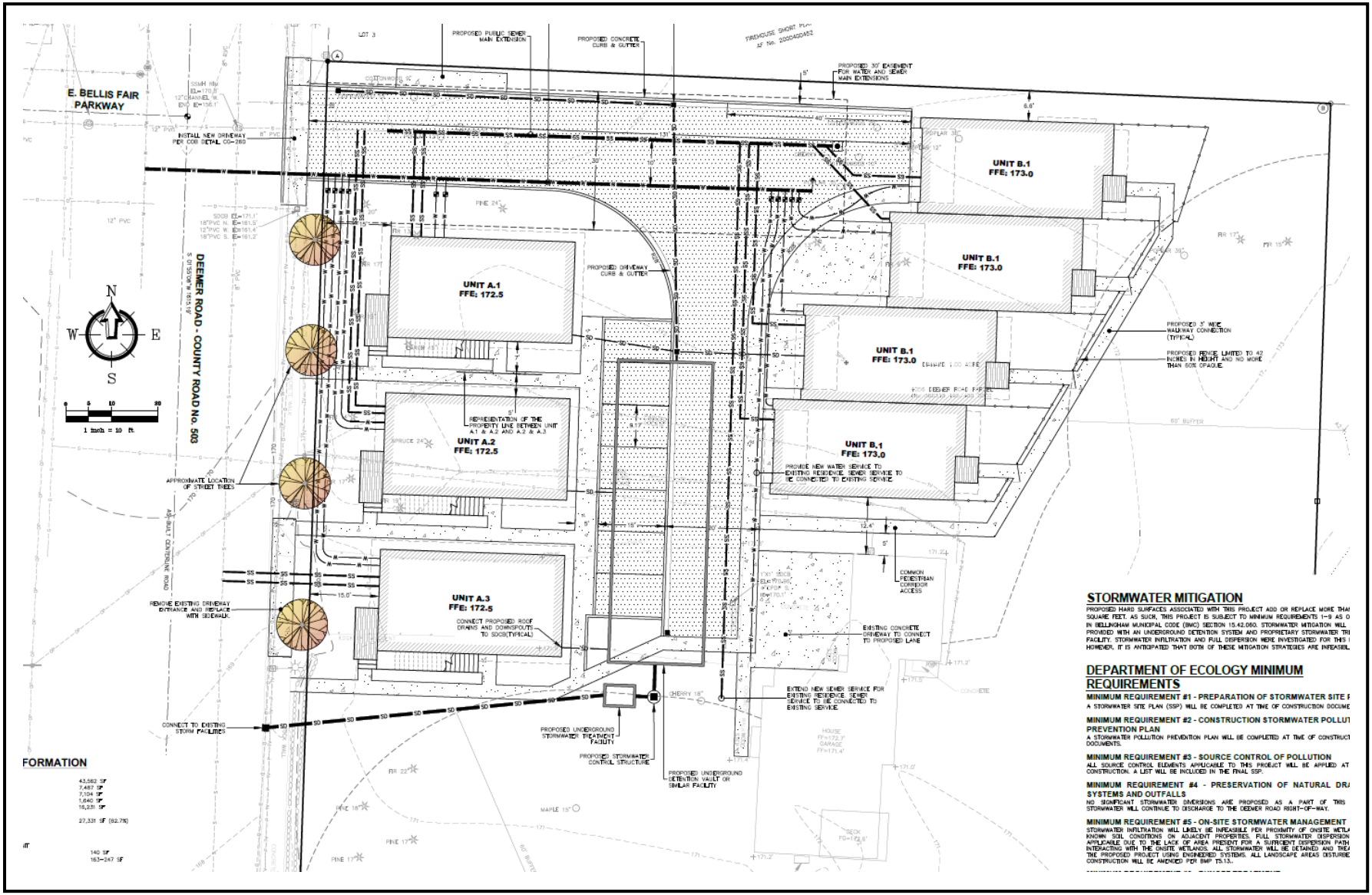
WETLANDS DELINEATED BY NORTHWEST ECOLOGICAL SERVICES, L.L.C. IN JANUARY OF 2022 AND LOCATED BY THIS FIRM IN FEBUARY OF 2022.

SHEET 1 OF 1
DATE: 02/09/2022
JOB NO: 21-443
DIR: 073803\PRINCE
CRD: 073803P
DRAWN BY: CHRIS
REVIEWED BY: JEROMY

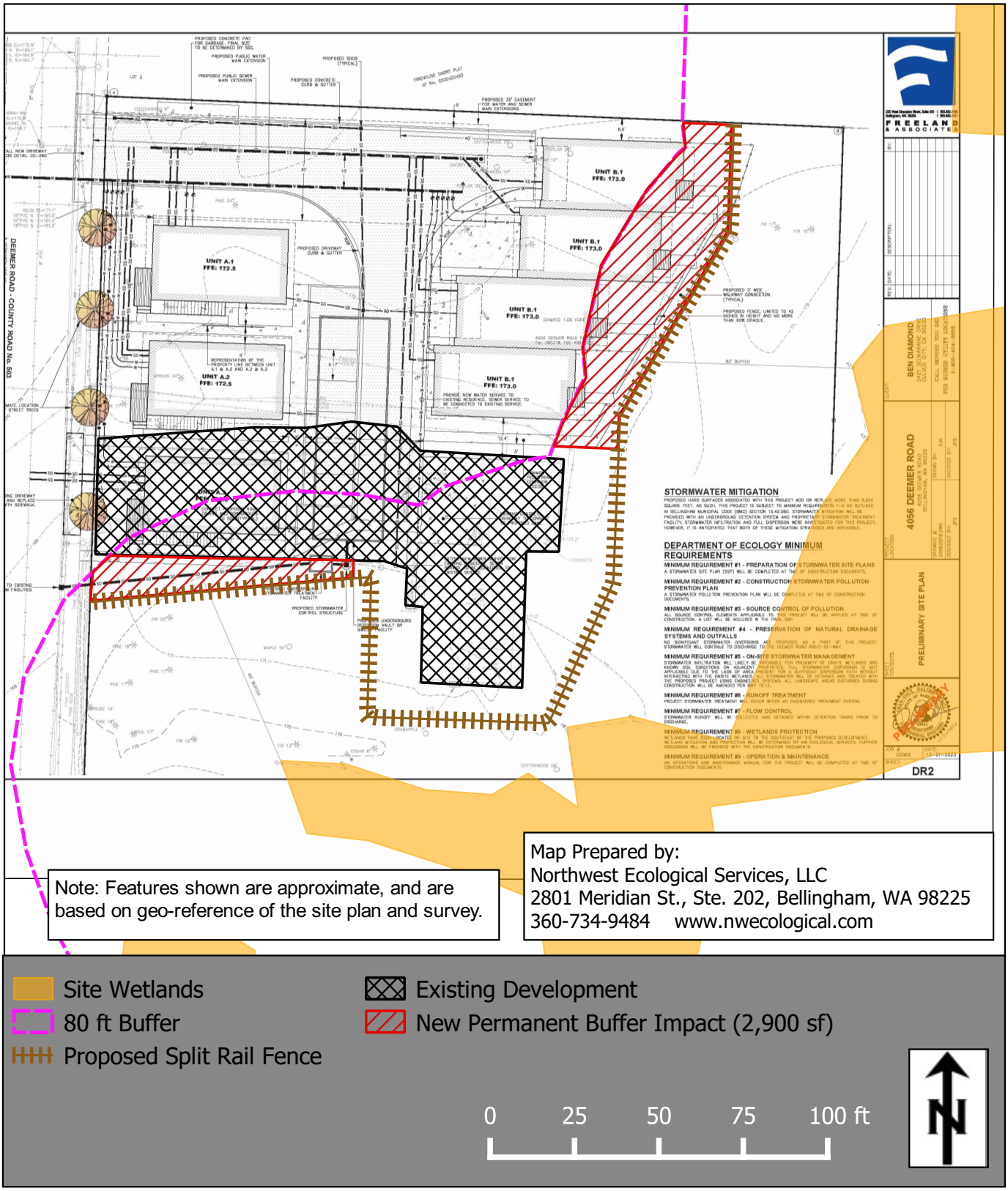
TOPOGRAPHY & WETLAND MAP
FOR BEN DIAMAND
PORTION OF THE NE 1/4, NW 1/4, SECTION 18,
TOWNSHIP 38 NORTH, RANGE 3 EAST OF W.M.
WHATCOM COUNTY, WASHINGTON

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

ECOLOGICAL NORTHWEST	**Site Survey (Northwest Surveying & GPS. INC.)**	**Figure 3**
	4056 Deemer Road – Parcel #380318 195488 Impact Assessment and Mitigation Plan	**JAN 2024**



ECOLOGICAL NORTHWEST	**Proposed Site Plan Detail** **(Freeland & Associates, 2024)** **4056 Deemer Road** **(Parcel 380318 195488)** **Impact Assessment & Mitigation Plan**	**Figure 4** **JAN 2024**



Note: Features shown are approximate, and are based on geo-reference of the site plan and survey.

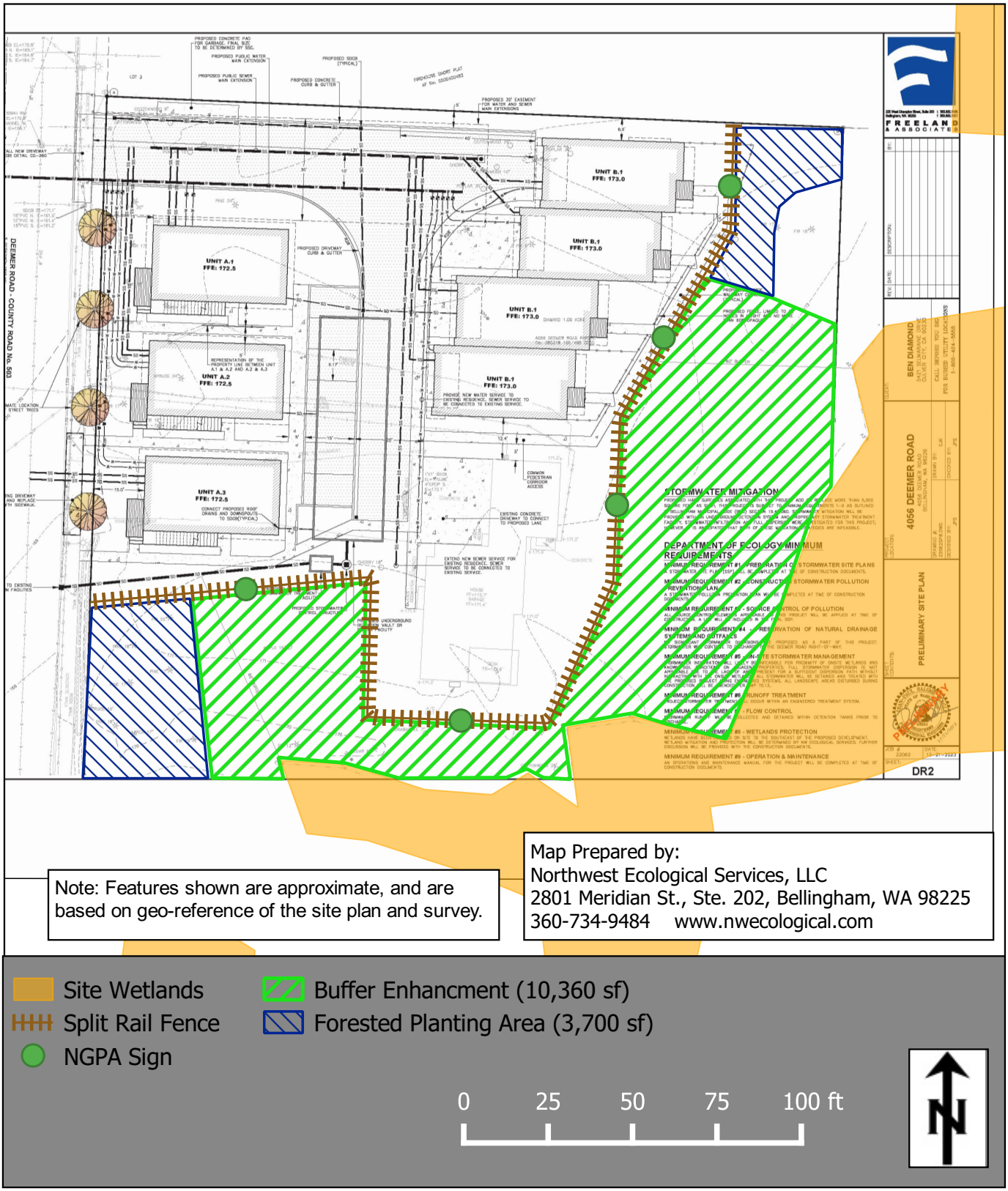
Map Prepared by:
Northwest Ecological Services, LLC
2801 Meridian St., Ste. 202, Bellingham, WA 98225
360-734-9484 www.nwecological.com

Site Wetlands
80 ft Buffer
Proposed Split Rail Fence
Existing Development
New Permanent Buffer Impact (2,900 sf)

0 25 50 75 100 ft

N

NORTHWEST ECOLOGICAL	**Impact Map** **4056 Deemer Road - Parcel #380318 195488** **Impact Assessment and Mitigation Plan**	**Figure 5** **JAN 2024**



Note: Features shown are approximate, and are based on geo-reference of the site plan and survey.

Map Prepared by:
Northwest Ecological Services, LLC
2801 Meridian St., Ste. 202, Bellingham, WA 98225
360-734-9484 www.nwecological.com

Northwest Ecological	**Mitigation Map** **4056 Deemer Road - Parcel #380318 195488** **Impact Assessment and Mitigation Plan**	**Figure 6** **JAN 2024**

APPENDIX F: CONTRACTORS CHECKLIST

CONTRACTOR'S CHECK LIST

To: Ben Diamand, Property Owner

City of Bellingham – Planning & Community Development Department

From: Molly Porter, Northwest Ecological Services, LLC (NES)

Date: May 31, 2023

RE: Mitigation Plan for 4056 Deemer Road, Bellingham, WA

This memorandum is intended to help you proceed with the successful installation of your mitigation project.

- The checklist is intended to be a summary of details from the mitigation plan and a proposed timeline. **This is not a replacement for details in the mitigation plan, please read it in its entirety for all information.**
- Tasks should take place after receiving approval of your mitigation plan, and appropriate permits.
- Tasks in this checklist should be completed in order.
- Please contact Molly Porter at NES (360.734.9484) at any time with questions on installation.

Approximate Date	Task	Comments
Prior to any clearing and grading	Mark work limits in the field. NO equipment access within wetlands and limit access in all mitigation planting areas to limit soil compaction.	COB and NES staff sign-off required
	Install required erosion control, wetland protection, tree protection before earthwork begins.	
Dry season (June to Sept)	Begin site preparation. Soil decompaction and invasive species removal per mitigation plan.	
	Order plants for fall/winter installation. Order in June/July to ensure availability.	NES staff must approve any species substitutions.
Fall	Cut the grass and weeds in all mitigation areas, as needed (beginning in early September). Continue invasive species removal	
	Record the conservation easement.	

Winter (Jan, Feb, March)	Call NES to set up a site inspection of material BEFORE plant installation.	
	Install plant material and mulch.	
	Install the NGPA signs and fencing	
	The as-built site visit and report- prepared by NES upon completion of the above tasks.	Contact NES upon completion