DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 20-123672-LO

Project Name/Address: Zheng Vegetation Management Plan / 5050 165th Pl SE

Planner: Drew Folsom

Phone Number: 425-452-4441

Minimum Comment Period: September 5, 2019

Materials included in this Notice:

☒ Blue Bulletin
☒ Checklist
☒ Vicinity Map
☒ Plans
☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:
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Development Services

SEPA Environmental Checklist

The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions

The checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully and to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions.

You may respond with “Not Applicable” or "Does Not Apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays. For assistance, see SEPA Checklist Guidance on the Washington State Department of Ecology website.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The city may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Background

1. Name of proposed project, if applicable 5050 165th Pl SE VMP
2. Name of applicant Cong Zheng
3. Contact person Cong Zheng Phone (404)426-1958
4. Contact person address 5050 165TH Place SE, Bellevue, WA 98006
5. Date this checklist was prepared December 5, 2020
6. Agency requesting the checklist Code Compliance

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7. Proposed timing or schedule (including phasing, if applicable)

Anticipated schedule is from December 20, 2020 to December 1, 2021.
Invasive activities to occur over a three week period.

8. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? If yes, explain.

No

9. List any environmental information you know about that has been prepared or will be prepared, that is directly related to this proposal.

Vegetation Managment Plan

10. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No

11. List any government approvals or permits that will be needed for your proposal, if known.

Approval from the City for removal of invasive plant species and installation of native plant species within buffer of critical area.

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12. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Proposal includes removal of invasive plants (primarily Himalayan blackberry) from eastern creek bank and installation of native plants along eastern and western creek banks. The project area is expected to extend

13. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and the section, township and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

King County Parcel No. 896540-0120
Section 23, Township 24N, Range 5E
5050 165th Place SE, Bellevue, WA 98006
Site in eastern half of Subject Property, within riparian corridor

Environmental Elements

Earth

1. General description of the site:
   - ☐ Flat
   - ☐ Rolling
   - ☐ Hilly
   - ☐ Steep Slopes
   - ☐ Mountainous
   - ☑ Other Moderate sloping to east, toward Lewis Creek

2. What is the steepest slope on the site (approximate percent slope)? 15% in eastern half

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3. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

USDA Classified as "BeC" — Beausite gravelly sandy loam with 6 to 15 percent slopes
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 220 days
Farmland classification: Not prime farmland

4. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

5. Describe the purpose, type, total area and approximate quantities and total affected area of any filling, excavation and grading proposed. Indicate the source of the fill.

No filling, excavation, or grading is proposed.

6. Could erosion occur as a result of clearing, construction or use? If so, generally describe.

Yes. Slight potential for temporary erosion during removal of blackberry and its replacement by native plant species. The total area included is approximately 30 feet by 100 feet.

7. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? No new impervious surfaces will be installed.

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8. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

Monitoring and possible installation of silt curtain if erosion is observed.

Air

1. What types of emissions to the air would result from the proposal during construction, operation and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

None

2. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

3. Proposed measures to reduce or control emissions or other impacts to air, if any.

N/A

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Water

1. Surface Water
   a. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

      Yes; Lewis Creek (Type F), discharges to Lake Sammamish

   b. Will the project require any work over, in or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

      Yes; Work within 200 feet will involve:
      1) Removal of invasive blackberry
      2) Installation of northwest native plants
      3) Installation of northwest native trees

   c. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill material.

      None

   d. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose and approximate quantities, if known.

      No

   e. Does the proposal lie within a 100-year floodplain? No
      If so, note the location on the site plan.

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f. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

2. Ground Water

a. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No

b. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

N/A

3. Water Runoff (including stormwater)
   a. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

None

   b. Could waste materials enter ground or surface waters? If so, generally describe.

N/A

   c. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No

Indicate any proposed measures to reduce or control surface, ground and runoff water, and drainage pattern impacts, if any.

Sediment from erosion is not expected to enter surface water (Lewis Creek) as minimal disturbance will occur. If erosion does occur, protective measures (e.g., silt curtain) will be installed.

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Plants

1. Check the types of vegetation found on the site:

   - [x] deciduous tree: alder, maple, aspen, other _____
   - [x] evergreen tree: fir, cedar, pine, other _____
   - [x] shrubs
   - [x] grass
   - [ ] pasture
   - [ ] crop or grain
   - [ ] orchards, vineyards or other permanent crops
   - [ ] wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other _____
   - [ ] water plants: water lily eelgrass, milfoil, other _____
   - [x] other types of vegetation blackberry

2. What kind and amount of vegetation will be removed or altered?

   Two trees have been removed
   Blackberry along creek banks (within Subject Property) will be removed.

   These will be replaced with two Thuja plicata (western red cedar) near the location of the two felled trees, one Pseudotsuga menziesii (douglas fir) atop the eastern bank of the creek, two Spiraea douglasii atop the eastern bank of the creek, one Acer circinatum (vine maple) atop the eastern bank of the creek and one atop the western

3. List any threatened and endangered species known to be on or near the site.

   None known

4. Proposed landscaping, use of native plants or other measures to preserve or enhance vegetation on the site, if any.

   Two trees have been removed
   Blackberry along creek banks (within Subject Property) will be removed.

   These will be replaced with two Thuja plicata (western red cedar) near the location of the two felled trees, one Pseudotsuga menziesii (douglas fir) atop the eastern bank of the creek, two Spiraea douglasii atop the eastern bank of the creek, one Acer circinatum (vine maple) atop the eastern bank of the creek and one atop the western

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5. List all noxious weeds and invasive species known to be on or near the site.

Himalayan blackberry

Animals

1. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

   Birds: ☐hawk, ☐heron, ☐eagle, ☐songbirds, ☐other _____

   Mammals: ☐deer, ☐bear, ☐elk, ☐beaver, ☐other _____

   Fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other _____

2. List any threatened and endangered species known to be on or near the site.

None known

3. Is the site part of a migration route? If so, explain.

Unknown

4. Proposed measures to preserve or enhance wildlife, if any.

Replacement of invasive blackberry with plants conducive of riparian corridor

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5. List any invasive animal species known to be on or near the site.

Unknown

Energy and Natural Resources

1. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

N/A

2. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

3. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

None

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Environmental Health

1. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill or hazardous waste, that could occur as a result of this proposal? If so, describe.

None known

   a. Describe any known or possible contamination at the site from present or past uses.

None known

   b. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known

   c. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None known

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d. Describe special emergency services that might be required.

Paramedics in case of physical harm during plant installation

e. Proposed measures to reduce or control environmental health hazards, if any.

None

2. Noise

a. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None known

b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

None greater than 85 dB

c. Proposed measures to reduce or control noise impacts, if any.

Primarily use of physical labor instead of mechanical means

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Land and Shoreline Uses

1. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

   Single family residences, zoned as R-3.5
   Proposed action will not affect land use on nearby or adjacent properties.

2. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to non-farm or non-forest use?

   None known

   a. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling and harvesting? If so, how?

      No

3. Describe any structures on the site.

   Residential structure to the west of the area of proposed action.

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4. Will any structures be demolished? If so, what?

No

5. What is the current zoning classification of the site? R-3.5

6. What is the current comprehensive plan designation of the site? N/A

7. If applicable, what is the current shoreline master program designation of the site?

N/A

8. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes; Site includes a portion of Lewis Creek

9. Approximately how many people would reside or work in the completed project? 3

10. Approximately how many people would the completed project displace? 0

11. Proposed measures to avoid or reduce displacement impacts, if any.

N/A

12. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

Proposed measures will protect and enhance the riparian corridor of the site.

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13. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any.

N/A

Housing

1. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

0

2. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

0

3. Proposed measures to reduce or control housing impacts, if any.

N/A

Aesthetics

1. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

N/A

2. What views in the immediate vicinity would be altered or obstructed?

None

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3. Proposed measures to reduce or control aesthetic impacts, if any

Proposed plan will enhance riparian corridor

Light and Glare

1. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None

2. Could light or glare from the finished project be a safety hazard or interfere with views?

N/A

3. What existing off-site sources of light or glare may affect your proposal?

None

4. Proposed measures to reduce or control light and glare impacts, if any.

N/A

Recreation

1. What designated and informal recreational opportunities are in the immediate vicinity?

None known

2. Would the proposed project displace any existing recreational uses? If so, describe.

None known

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3. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.

N/A

Historic and Cultural Preservation

1. Are there any buildings, structures or sites located on or near the site that are over 45 years old listed in or eligible for listing in national, state or local preservation registers located on or near the site? If so, specifically describe.

None known

2. Are there any landmarks, features or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None known

3. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

N/A

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4. Proposed measures to avoid, minimize or compensate for loss, changes to and disturbance to resources. Please include plans for the above and any permits that may be required.

Two trees have been removed
Blackberry along creek banks (within Subject Property) will be removed.

These will be replaced with two Thuja plicata (western red cedar) near the location of the two felled trees, one Pseudotsuga menziesii (douglas fir) atop the eastern bank of

Transportation

1. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Closest public access via 165th Place Southeast which is approximately 50 feet west of site.

2. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No

3. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None

4. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No

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5. Will the project or proposal use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe.

No

6. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

To include up to 5 personal operated vehicles (POVs) or company vehicles to transport workers to and from site.
Estimated based on typical scope of work.

7. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No

8. Proposed measures to reduce or control transportation impacts, if any.

N/A

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Public Service

1. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

   None known

2. Proposed measures to reduce or control direct impacts on public services, if any.

   N/A

Utilities

1. Check the utilities currently available at the site:

   - ☐ Electricity
   - ☐ natural gas
   - ☐ water
   - ☐ refuse service
   - ☐ telephone
   - ☐ sanitary sewer
   - ☐ septic system
   - ☐ other

2. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed.

   No utilities needed

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Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature _____

Name of signee CONG ZHENG

Position and Agency/Organization _____

Date Submitted 12/22/2020

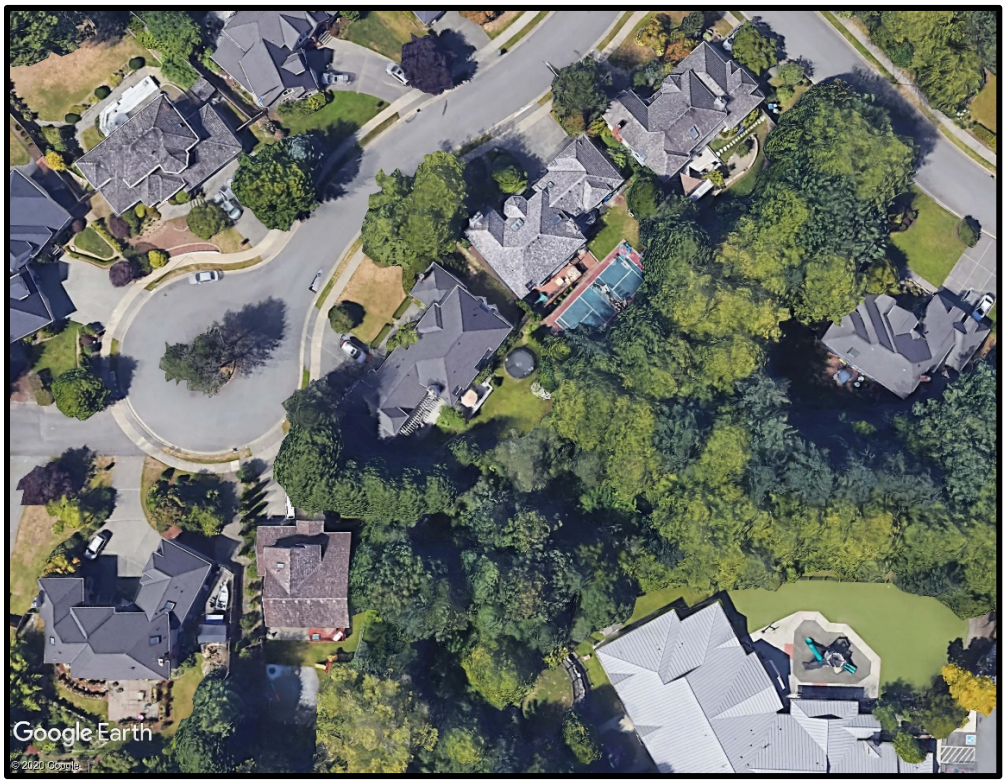
DF 2/17/2021

Vegetation Management Plan

5050 165th Place Southeast

Bellevue, WA 98006

King County Parcel: 896540-0120



Prepared for:

Cong Zheng
5050 165th Place SE
Bellevue, WA 98006

Prepared by:

GALLOWAY ENVIRONMENTAL, INC.
15600 NE 8th Street, Suite B1, 617
Bellevue, Washington 98008

December 5, 2020

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ATTACHMENTS

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Figure 1 Site Location Map
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APPENDICES

Appendix A Site Photographs

1.0 INTRODUCTION

Galloway Environmental, Inc. (GEI) has prepared this Vegetation Management Plan (VMP) for implementing the necessary steps to help ensure protection of the environmental sensitive area of the property addressed as 5050 165th Place Southeast, Bellevue, Washington, hereafter referred to as the "Site". King County lists the site to be associated with parcel number 896540-0120. The Site location is shown in Figure 1.

This VMP presents the objectives, methodology, and technical approach for implementing management actions to provide protection to the on-site critical area. The purpose of this VMP is to obtain approval and concurrence by the City of Bellevue (the "City") for the planned mitigation and management for previous and planned alterations to vegetation within the critical area of the site.

By restoring and enhancing the vegetation along the banks of the on-site stream (Lewis Creek), the critical area will receive greater ecological and biological functions. These actions will serve as equal to, or greater than, a two-to-one ratio mitigation.

The objectives of this VMP, described herein, are to:

- Provide a description of the methodology and technical basis for the previous and planned changes to site vegetation;
- Provide a detailed description of the individual components of the actions, including a site analysis, and impact analysis, and key actions of proposed actions; and
- Demonstrate that the critical area will receive equivalent or greater ecological and biological functions through the proposed mitigation actions.

1.1 CRITICAL AREA BACKGROUND INFORMATION

The site is associated with the Lake Washington/Cedar/Sammamish Watershed, also known as Water Resource Inventory Area 8 (WRIA 8). WRIA 8 encompasses approximately 700 square miles of land and ranges in elevation from sea level to 5,500 feet above sea level (asl).

The subject creek, Lewis Creek, is associated with the Lewis Creek Basin (Washington State Stream Number 08-0162). Per King County, the basin encompasses approximately 1,209 acres of land.

Lewis Creek headwaters originate approximately 2 miles southwest of Lake Sammamish in a low gradient area of Bellevue's Eastgate area, on the northeast side of Cougar Mountain, and discharges into the southwest portion of Lake Sammamish. It is classified as a Type "F" waterway, meaning that it is a naturally defined waterway within the bank-full widths of defined channels, periodically inundated with water, and contains fish habitat. Type F waters also includes habitat that may be recovered by restoration or management.

According to King County, the dominant land use in the basin is developed with low to medium intensity, forest, and open spaces. Approximately 71 percent (%) of the basin is developed, 27% is forested, less than 2% includes shrub land, and less than 1% is characterized as "other".

1.1.1 Location

The Site is located at 5050 165th Place Southeast, Bellevue, Washington *(47° 33' 26" N, -122° 07'15" W)*. It is situated approximately 0.18 miles east of the intersection of 132nd Avenue NE and NE 143rd Street (*see Figure 1-1 — Site Location Map)*.

1.1.2 Existing Conditions Site Analysis

The site is located in an area of the City of Bellevue, zoned as "R-3.5" which signifies 3.5 dwellings per acre. It is developed with a two story, 3,500 square foot, single-family residential structure which was constructed in 1990. Of the 14,570 square foot parcel, the impervious surfaces account for approximately 3,120 square feet and include the residential structure, attached garage, and paved driveway. The eastern portion of the site contains Lewis Creek.

Stream flow to this portion of the creek is highly dependent upon seasonal rates and volumes of precipitation and snowpack. As such, it may experience a wide flow regime. Seasonal high flows are typical during the period from mid to late fall through early spring. During this period, the active channel experiences a higher degree of sediment transport. During the period from

spring mid to late fall lower water flows are typical, resulting in a higher degree of sediment deposition.

GEI's fisheries biologist, Mr. Dylan Galloway performed the site visits on November 9, 2020, during which, access to the stream was limited due to dense Himalayan blackberry. The active channel width observed was estimated to be approximately 6 feet wide and varied in depth from approximately four inches to 18 inches. Due to seasonal low flows, observed creek water volume was relatively low. The substrate observed consisted of small to moderate sized smooth gravels and cobbles over small, well-graded gravels, which are underlain by finely graded stream sediments. The substrate appears to be suitable habitat for aquatic organisms. However, due to very low flows during the summer and early fall seasons, it is unlikely that migratory fish species are present in this section of the creek during this period.

A dense growth of invasive blackberry was observed as the dominant plant species from the eastern edge of the waterline to the top of the stream bank. Other ornamental plantings (e.g., ferns) were observed. Woody trees such as oak, thuja, and beech are prevalent along the stream bank at the subject property.

1.1.3 Area Impact Analysis

As noted above, two trees situated near Lewis Creek, have been recently felled by the Owner's contractor. Because of the density of trees in the area, significant environmental impacts are considered minimal. The removal of the trees is not considered significant to increases in turbidity or temperature to the waters of Lewis Creek.

2.0 ENVIRONMENTAL GOALS AND OBJECTIVES

The overall goals and objectives of this VMP are to achieve greater ecological and biological functions to the critical area where the Owner's contractor removed the trees. Specifically, the proposed actions will serve as compensation for the critical area.

2.1 Proposed Compensation

2.1.1 Proposed Mitigation Actions

The proposed compensation actions include several components, including:

- Remove the dense blackberry and other invasive plantings situated within the creek channel to a distance of approximately 10 feet from the top of bank (within the property boundary);
- Replant two conifer trees in the vicinity of the two removed trees; and
- Plant five Pacific Northwest native plants for along the streambank where blackberry was removed to provide supplemental shading to the creek and erosion control (see Appendix A).

2.1.2 Purposes of Compensation Actions

As noted above, the overall goals and objectives of the proposed compensation actions entail achieving greater ecological and biological functions to the critical area at the site. The actions are considered sufficient compensation for an on-site habitat enhancement ratio of at least two-to-one.

2.1.3 Anticipated Impacts to Critical Area

As previously noted, the previous removal of the on-site trees is considered a minimal negative impact to the critical area. By performing mitigation actions outlined in Section 2.1.1, the overall health and quality of the critical area will gain significant value. The creek banks are currently overgrown with an invasive blackberry which has been observed to be dense enough to pose significant risk to resident aquatic organisms. By replacing these with plantings typical of aquatic ecosystems, the creek will become a more suitable habitat for aquatic organisms and associated waterfowl and wildlife. Further, such actions will enhance the wildlife corridor.

2.2 Review of Best Available Science – Support of Proposed Mitigation

GEI reviewed Best Available Science (BAS) in support of mitigation to compensation for the removal of the two trees at the site. Specifically, GEI reviewed pertinent sections of Part 20.25H, *Critical Areas Overlay District* of Chapter 20.25, *Special and Overlay Districts* of the City of Bellevue Land Use Code.

2.2.1 Channel Conditions and Dynamics

The previous felling of two trees resulted in no observable alterations to the channel migration conditions, thereby resulting in no changes to the channel dynamics.

The proposed mitigation actions, presented in Section 2.1.1, are expected to result in no alterations to the current channel migration conditions and dynamics will not be affected. The channel migration zone will not be artificially enhanced or altered in any way.

2.2.2 Water Quality

King County monitors ecological and biological characteristics of Lewis Creek from a station situated near the intersection off 187th Avenue Southeast and 185th Place Southeast. Water quality samples are collected monthly to test for temperature, dissolved oxygen (DO), pH, conductivity, turbidity, total suspended solids, ortho-phosphorus, total phosphorus, ammonia, nitrate-nitrogen, total nitrogen, and fecal coliform (FC) bacteria. According to King County, Lewis Creek has been included in the Washington State Department of Ecology (Ecology) 303(d) list for violation of water temperature, DO, and FC bacteria under Category 5. Category 5 signifies that one or more water quality standards have been demonstrated to violate the Clean Water Act (CWA) water quality standards and requires a water improvement project.

Water quality parameters are expected to be slightly altered as a result of the proposed actions. The selected plants and woody trees slated to replace the two felled trees and blackberry are

expected to increase canopy coverage and reduce temperature and long-term sediment input. This will result in favorable long-term conditions for facilitating a stable and diverse aquatic ecosystem. By using native, stream-enhancing vegetation, the selected plants and woody trees will also serve as more natural nutrient input to the creek.

2.2.3 Habitat Access and Elements

Habitat access and other elements including substrate complexity, woody debris, pool frequency, pool quality, off channel habitat, and refugia are expected to be altered as a result of the previously felled trees and the proposed actions. The alterations include reduction rates of sedimentation and stabilize substrate conditions as vegetation matures. The proposed actions are also expected to promote habitat coverage for aquatic organisms such as insects, amphibians, and fish.

2.2.4 Watershed Conditions

Frequencies and volumes of overland and subsurface water flows are not expected to be altered to any significant degree. Vegetation selected to replace the felled trees and blackberry is expected to provide a greater degree of water storage and may stabilize rates of water input to Lewis Creek.

2.2.5 Functioning Conditions

A culvert at I90 results in a fish migration barrier to the creek. Various salmonid species have been observed downgradient to the culvert. Though salmonid species are not expected to be present within the creek at the site, the creek contributes to the overall productivity of listed salmonid species downstream. As such, proposed actions are expected to benefit such factors downstream.

The felled trees and the proposed actions are not expected to alter the functioning conditions of the creek or downstream of the creek.

3.0 PERFORMANCE STANDARDS

Proper evaluation of conditions is a key aspect in assessing if the goals and objectives of the proposed actions have been successfully attained. The following performance standards have been selected as appropriate monitoring actions in order to minimize the potential for adverse impacts to the creek.

3.1 Water Quality Standards

Because in-water work is not expected to occur, and replacement of invasive vegetation near the creek is expected to occur over a short duration, water quality standards (parameters) are not planned for monitoring.

3.2 Vegetation Standards

The owner will monitor the health of the planned replacement vegetation and the soils around the vegetation from installation through its establishment. Upon confirmation that the replacement vegetation is stable, monitoring of the vegetation and the soils around the vegetation will halt.

4.0 DETAILED CONSTRUCTION PLAN

The following sections provide detailed descriptions of the activities that will be completed during the proposed actions at the site.

4.1 Proposed Sequencing

Prior to the start of activities within or at the top of the creek bank, best management practices (BMPs) will be implemented for erosion and sedimentation control. This will include the installation of silt curtain fencing along the bottom of bank, just above the current water line. Blackberry bushes may need to be significantly cut down to reach optimum area of installation.

The silt fencing will be installed at a minimum of three inches below grade to ensure proper capture of soils and will be reinforced on the stream-side by wire fencing. Removal of the invasive vegetation will then occur by manual extraction to clear the bank for installation of selected planting. No herbicides will be incorporated into the removal or control of such vegetation. Following the vegetation removal, selected plantings will be installed.

4.2 Detailed Planting Plan

The plantings for this project have been selected because they are northwest natives typically found along streams and wetlands. Together, these plants will reduce soil erosion with their intertwining root systems and suckering growth habit. They are relatively drought tolerant, non-invasive and will require a very minimum level of maintenance. They will provide ample shade, good nutrient input, and shelter to native wildlife and aquatic organisms. It should be noted that the numbers of each, listed below, may vary slightly, depending upon readily available sources.

The anticipated plantings include two Thuja plicata (western red cedar) near the location of the two felled trees, one Pseudotsuga menziesii (douglas fir) atop the eastern bank of the creek, two Spiraea douglasii atop the eastern bank of the creek, one Acer circinatum (vine maple) atop the eastern bank of the creek and one atop the western bank of the creek, and up to three Thuja cultivars (green giant) atop the western bank of the creek. The actual species, their totals numbers, and their locations may be modified, based on availability.

4.3 Anticipated Final Outcome

The proposed actions are expected to enhance the creek channel and provide additional habitat for aquatic organisms and associated waterfowl and wildlife. This will encourage species diversity and richness within the critical habitat along the site as well as down-gradient to the site.

5.0 COMPLIANCE MONITORING

5.1 Protection Monitoring

Prior to the proposed actions, protection monitoring will consist of conducting observations of the creek and its banks to provide a baseline for current conditions. A comparison of observations made between the baseline conditions and those observed during the proposed actions will determine if unanticipated negative impacts occur. Should negative impacts be observed, engineering controls will be implemented to control such factors.

5.2 Performance Monitoring

Performance monitoring is used to verify that the proposed actions have attained the desired enhancement to ensure satisfactory mitigation of the felled trees within the critical area. Periodic observations of conditions will occur throughout the proposed actions to ensure anticipated benefits from the proposed actions are being realized.

5.3 Confirmational Monitoring

Long-term monitoring will be performed to document and track the impacts of development on the functions and values of the critical area. To verify success of the proposed actions, long-term monitoring will include establishing vegetation attributes to track survival and establishment of new plantings as well as changes in plant species over time. If new plantings are observed to fail their intended use, replacement plantings will be instituted.

6.0 CONTINGENCY PLAN

Should monitoring reveal significant deviations from expected outcomes, corrective action will take place. There may be few corrective action alternatives for deviations resulting from natural influences such as flash floods, fires, or inclement weather. Actions for most deviations will be chosen on a case-by-case basis. However, if it is determined that alternative corrective actions such as plant replacements are necessary, such action will take place with as little delay as possible.

7.0 LIMITATIONS

To the extent that preparation of this VMP has required the application of best professional judgment and the application of scientific principles; certain results of this work have been based on subjective interpretation. We make no warranties, express or implied including without limitation, warranties as to merchantability or fitness for a particular purpose. The information provided in this VMP is not to be construed as legal advice.

This VMP was prepared solely for the Owner and the contents thereof may not be used or relied upon by any other person without the express written consent and authorization of GEI.

ATTACHMENT 1

FIGURES

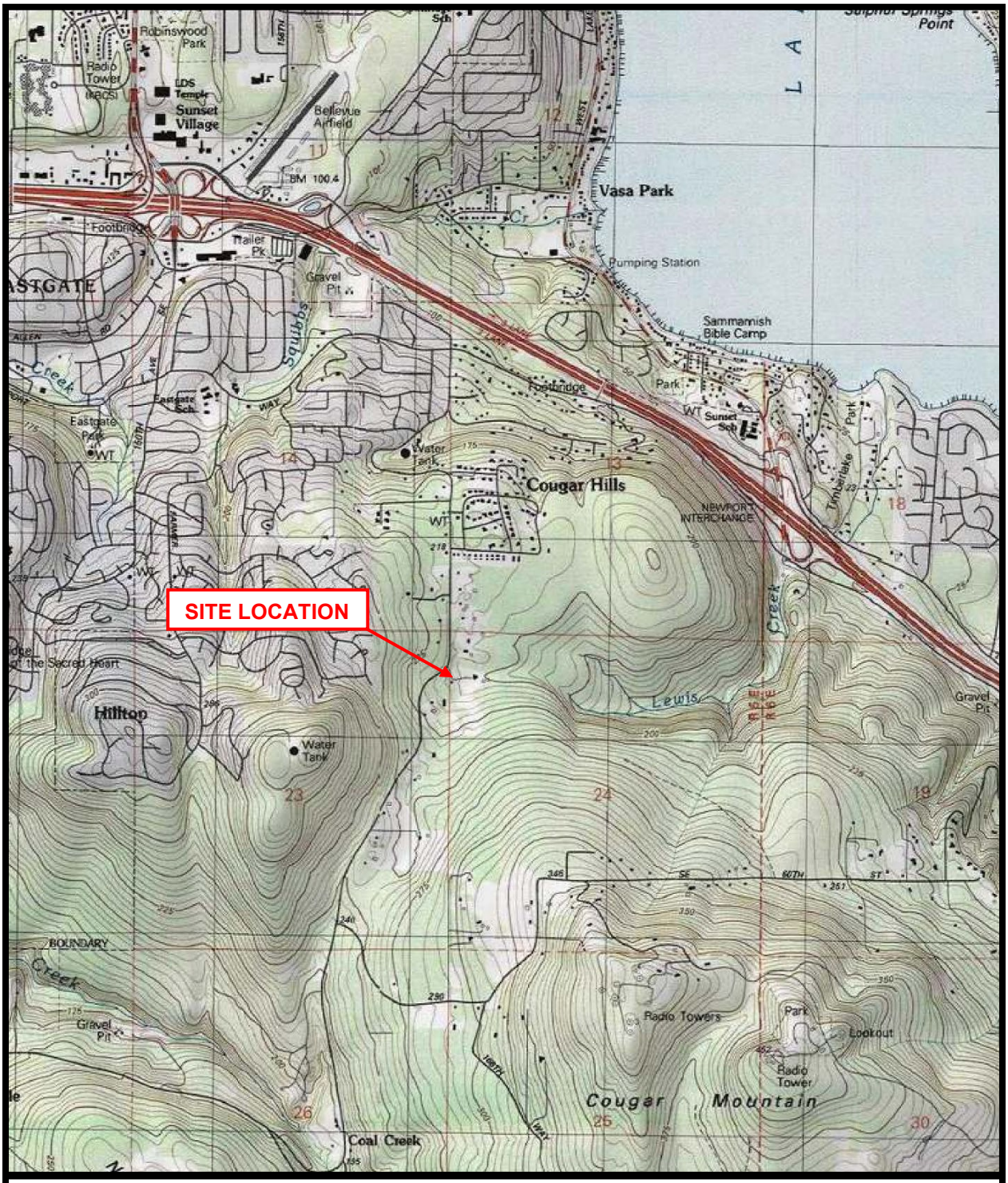

FIGURE 1 — SITE LOCATION MAP

Zheng Residence Vegetation Management Plan

5050 165th Place Southeast, Bellevue, Washington
Source: WSDOT, November 2020; GEI Project #40030

0 1/4 mi 1/2 mi
(approx. scale)

Galloway Environmental, Inc.

N

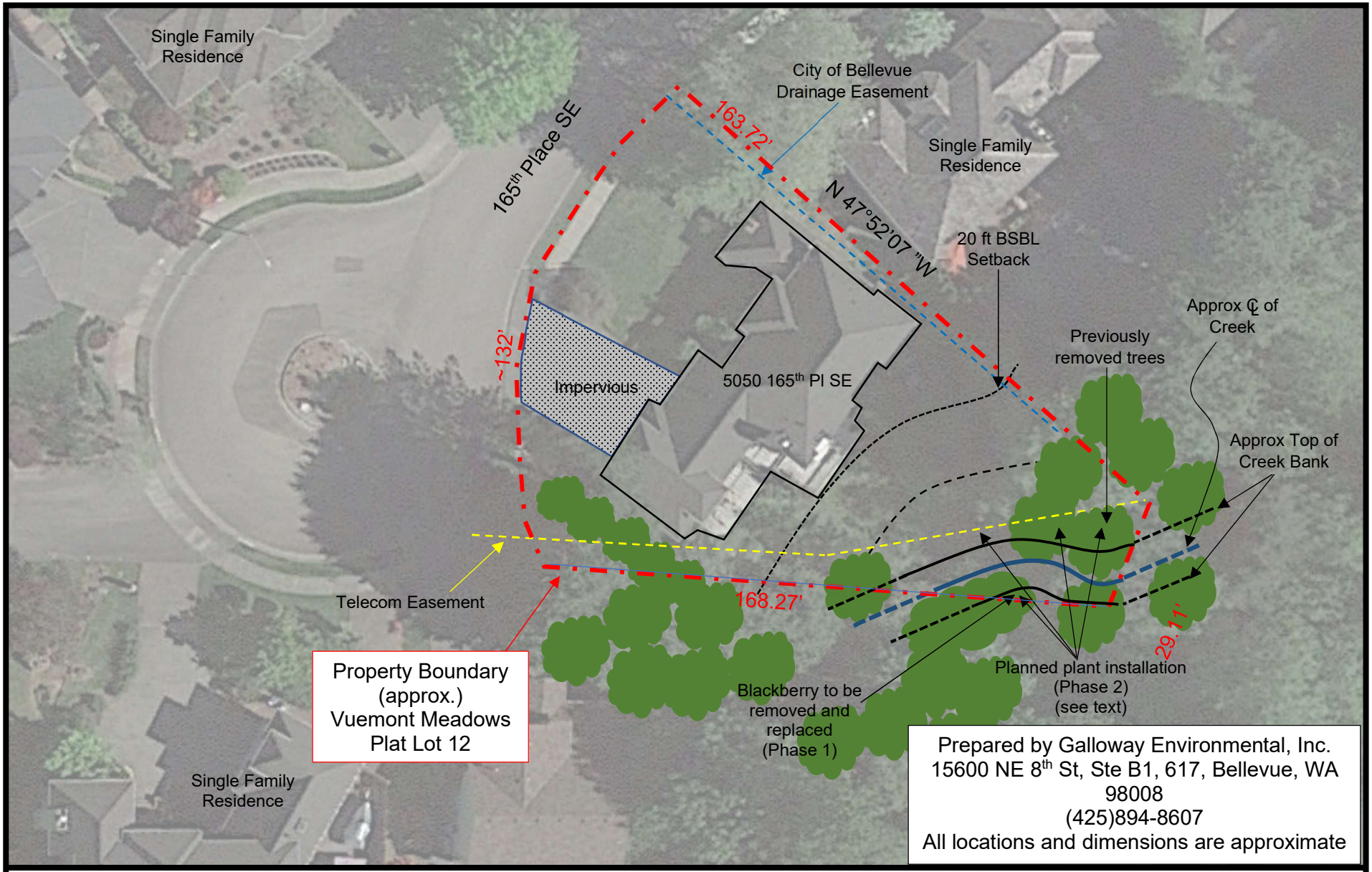

FIGURE 2 — SITE PLAN B

Zheng Residence Vegetation Management Plan
5050 165th Place Southeast, Bellevue, Washington
Source: GoogleEarth; Nov. 2020 & Borghousen Consulting Engineers, Inc
GEI Project #40030

0 50 ft 100 ft
Approx Scale

Galloway Environmental, Inc.

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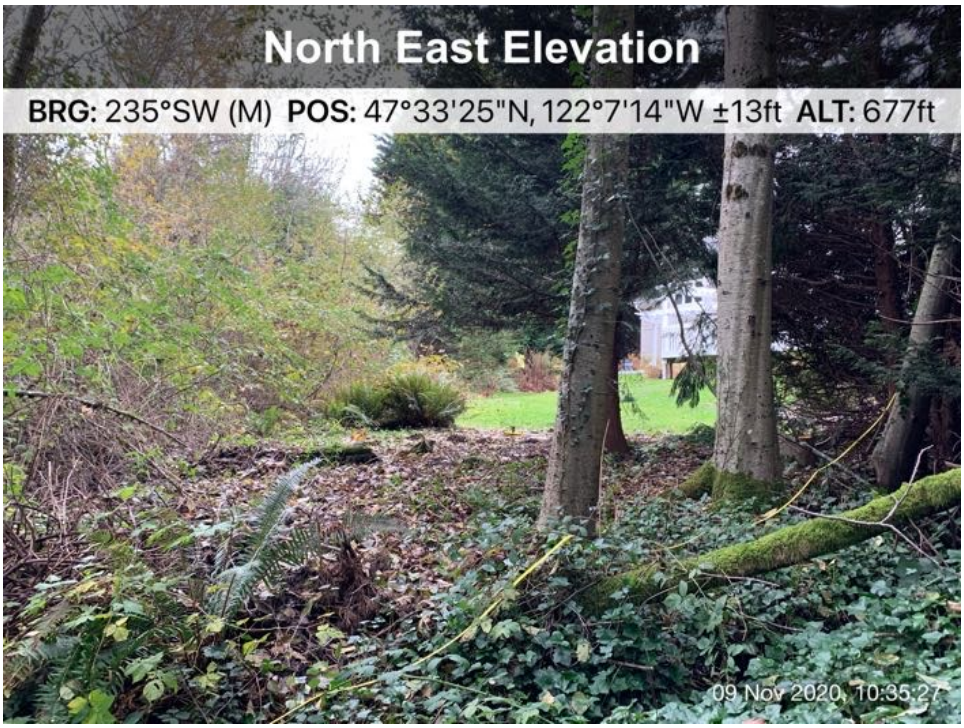
APPENDICES

Appendix A

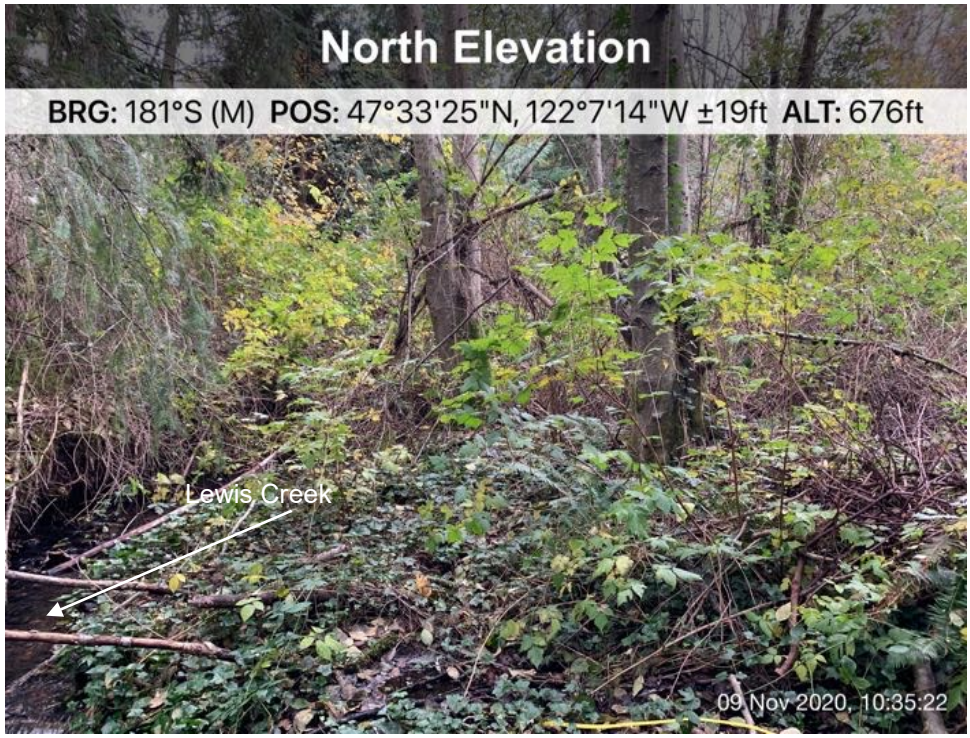
Site Photographs

Project No. 40030	**Description**	Photo of site, western creek bank, facing NE	**Photo 1**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	

Project No. 40030	**Description**	Photo of site, western creek bank, facing NE	**Photo 2**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	

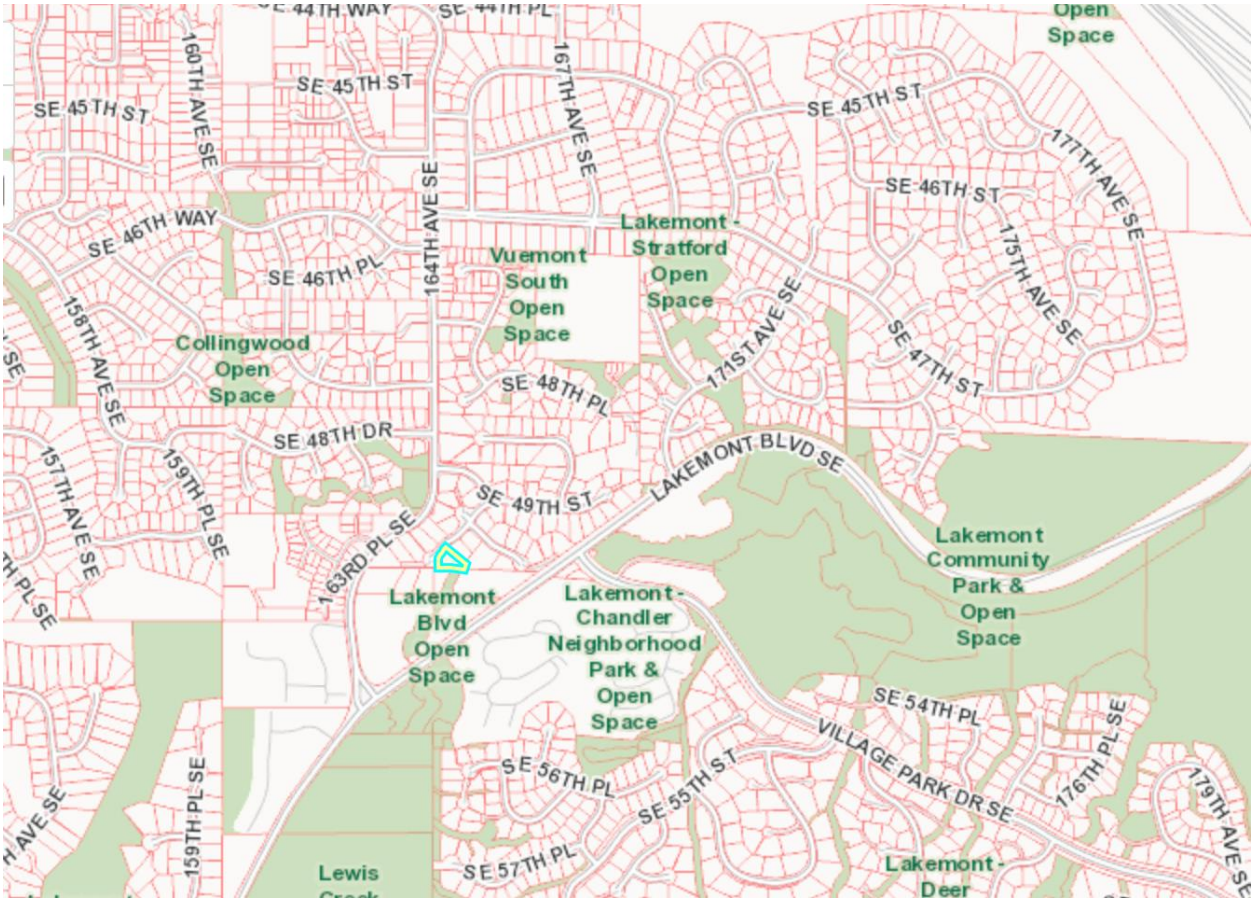


Project No. 40030	**Description**	Photo of site, western creek bank, facing SW	**Photo 3**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	



Project No. 40030	**Description**	Photo of primary area of investigation, facing S	**Photo 4**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	

Project No. 40030	**Description**	Photo of Lewis Creek, facing SE	**Photo 5**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	

Project No. 40030	**Description**	Photo of Lewis Creek, facing NE	**Photo 6**
	Site Name	Vegetation Mgmt Plan; 5050 165th Place SE, Bellevue, WA	**Photo Date** November 9, 2020
	Client	Cong Zheng	

Vicinity Map