



DEVELOPMENT SERVICES DEPARTMENT
 ENVIRONMENTAL COORDINATOR
 450 110th Ave NE
 BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Chris and Jacelyn Carr

LOCATION OF PROPOSAL: 4000 West Lake Sammamish Parkway SE

DESCRIPTION OF PROPOSAL: Proposed work includes the removal of a concrete retaining wall and paving at the ordinary high water mark, and removal of steel railings, a log breakwater and a personal watercraft lift in the water. New ramp, boulder outcroppings, a block wall, and stone pavers are proposed improvements within the shoreline buffer. A planting plan including native shoreline plantings is proposed to mitigate site impacts.

FILE NUMBERS: 13-117281-LO and 13-117284-WG **PLANNER: Heidi M. Bedwell**

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

- There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.
- This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **2/20/2014**
- This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5:00 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so as to have significant adverse environmental impacts; if there is significant new information indicating a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project); or if the DNS was procured by misrepresentation or lack of material disclosure.

Wendy A. Lane
 Environmental Coordinator

2/6/2014
 Date

OTHERS TO RECEIVE THIS DOCUMENT:

- State Department of Fish and Wildlife / Stewart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- Attorney General ecyolyef@atg.wa.gov
- Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us



**City of Bellevue
Development Services Department
Land Use Staff Report**

Proposal Name: Carr Residence Shoreline stabilization and landscaping project

Proposal Address: **4000 West Lake Sammamish Parkway SE**

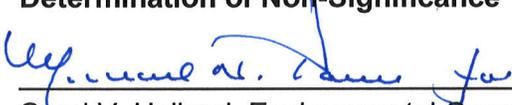
Proposal Description: Applicant requests a critical areas land use permit and shoreline substantial development permit approval to modify an existing improved shoreline. Proposed work includes the removal of a concrete retaining wall and paving at the ordinary high water mark, and removal of steel railings, a log breakwater and a personal watercraft lift in the water. New ramp, boulder outcroppings, a block wall, and stone pavers are proposed improvements within the shoreline buffer. A planting plan including native shoreline plantings is proposed to mitigate site impacts.

File Number: **13-117281-LO and 13-117284-WG**

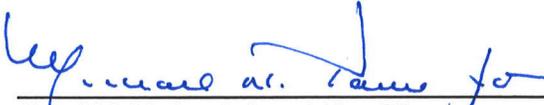
Applicant: **Chris and Jacelyn Carr**

Decisions Included: Shoreline Substantial Development and Critical Areas Land Use Permit
(Process II. LUC 20.30P, 20.30R)

Planner: **Heidi M. Bedwell, Senior Planner**

**State Environmental Policy Act
Threshold Determination:** **Determination of Non-Significance**


Carol V. Helland, Environmental Coordinator
Development Services Department

Director's Decision: **Approval with Conditions**


Carol V. Helland, Land Use Director
Development Services Department

Application Date: June 6, 2013
Notice of Application Publication Date: July 3, 2013
Decision Publication Date: February 6, 2014
SEPA Appeal Deadline: February 20, 2014 (14 Day Appeal Period)
Project SSDP Appeal Deadline: February 27, 2014 (21 Day Appeal Period)

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

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1. Environmental Checklist
2. Critical Areas Report and Project Plans

I. Proposal Description

The applicant is requesting a Shoreline Substantial Development and Critical Areas Land Use Permit in order to modify existing improvements along the shoreline of Lake Sammamish. Proposed work includes the removal of a concrete retaining wall and paving at the ordinary high water mark, and removal of steel railings, a log breakwater and a personal watercraft lift in the water. New ramp, boulder outcroppings, a block wall, and stone pavers are proposed improvements within the shoreline buffer. A planting plan including native shoreline plantings is proposed to mitigate site impacts.

Because the project involves development in the shoreline and the cost exceeds the minimum threshold for permitting under shoreline rules, a Shoreline Substantial Development Permit is required. Similarly, the land use code specifies that if a proposal causes disturbance or modification of a critical area or critical area buffer, then the proposal shall require critical areas land use permit approval and critical areas report unless otherwise exempted. Because this proposal involves disturbance within shoreline buffer, a critical areas land use permit is required. To gain approval, the applicant must gain compliance with the critical areas land use permit decision criteria, performance standards specific to the use, and performance standards specific to the applicable critical area.

The project is supported by SEPA analysis (Attachment 1), a project critical areas report/analysis (Attachment 2), and project plans. **Project conditions of approval are on found in section X of this report.**

II. Site Description, Zoning, Land Use and Critical Areas

A. Site Description



The subject property is developed with a single family residence adjacent to Lake Sammamish and West Lake Sammamish Parkway. In addition to the existing, newly

remodeled residence, the site contains several improvements and modifications along the water's edge. These include: a boathouse, boatlift with moorage cover, a series of concrete rubble retaining walls, and a watercraft dock.

B. Zoning

The property is zoned R-5 (a single family zoning district) and is within the Shoreline and Critical Areas Overlay districts.



C. Land Use Context

The site and surrounding development are characterized by single-family residential development. The site is accessed via a private driveway connected to West Lake Sammamish Parkway SE. Residential lots in the vicinity contain similar improvements to the subject property including docks, boatlifts, landscape improvements, and shoreline stabilization.

D. Critical Areas Functions and Values

i. Shorelines

Shorelines provide a variety of functions including shade, temperature control, water purification, woody debris recruitment, channel, bank and beach erosion, sediment delivery, and terrestrial-based food supply (Gregory et al. 1991; Naiman et al. 1993; Spence et al. 1996).

Shorelines provide a wide variety of functions related to aquatic and riparian habitat, flood control and water quality, economic resources, and recreation, among others. Each function is a product of physical, chemical, and biological processes at work within the overall landscape. In lakes, these processes take

place within an integrated system (ecosystem) of coupled aquatic and riparian habitats (Schindler and Scheuerell 2002). Hence, it is important to have an ecosystem approach which incorporates an understanding of shoreline functions and values. The discussion presented herein emphasizes this ecosystem approach.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The site is located in the R-5 zoning district. The R-5 zoning dimensional requirements found in LUC 20.20.010 apply to the proposal. The plans submitted generally demonstrate conformance with these standards, however conformance will be verified during building permit review.

B. Critical Areas and Shoreline Overlay Requirements: Consistency with Land Use Code

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) and Shoreline Overlay (LUC 20.25E) establish performance standards and procedures that apply to development on any site which contains in whole or in part any portion designated as critical area, critical area buffer or structure setback from a critical area or buffer and shoreline area. The project area is within a 25-foot shoreline buffer and structure setback and is subject to the performance standards found below.

20.25E.080

B. General Regulations Applicable to All Land Use Districts and Activities.

1. Where applicable, all federal and state water quality and effluent standards shall be met.
2. If a property extends into the Shoreline Overlay District, the Shoreline Master Program Policies and these use regulations shall apply only to that portion of the property lying within the Shoreline Overlay District.
3. All development within the Shoreline Overlay District shall be accompanied by a plan indicating methods of preserving shoreline vegetation and for control of erosion during and following construction in accordance with Part [20.25H](#) LUC, City of Bellevue Clearing and Grading regulations, Chapter [23.76](#) BCC, and the Comprehensive Plan.
4. Special care shall be exercised to preserve vegetation in wetland, shoreline and stream corridor bank areas in order to prevent soil erosion. Removal of vegetation from or disturbance of shoreline critical areas and shoreline critical area buffers, and from other critical area and critical area buffers shall be prohibited, except in conformance with Part [20.25H](#) LUC and the specific performance standards of this section.
5. Maximum height limitation for any proposed structure within the Shoreline Overlay District shall be 35 feet, except in land use districts with more restrictive height limitations. The method of measuring the maximum height is described in WAC [173-14-030\(6\)](#). Variances to this height limitation may be granted pursuant to Part [20.30H](#) LUC.

6. The Bellevue Shoreline Master Program, in conjunction with existing Bellevue land use ordinances and Comprehensive Plan policies, shall guide all land use decisions in the Shoreline Overlay District.
7. Any development within the Shoreline Overlay District shall comply with all applicable Bellevue ordinances, including but not limited to the Bellevue Land Use Code, Sign Code, and clearing and grading regulations.
8. The dead storage of watercraft seaward of the ordinary high water mark of the shoreline is prohibited.
9. Where applicable, state and federal standards for the use of herbicides, pesticides and/or fertilizers shall be met, unless superseded by City of Bellevue ordinances. Use of such substances in the shoreline critical area and shoreline critical area buffer shall comply with the City's "Environmental Best Management Practices."
10. Adequate storm drainage and sewer facilities must be operational prior to construction of new development within the Shoreline Overlay District. Storm drainage facilities shall be separated from sewage disposal systems.

The proposal complies with the above performance standards. The project will comply with all state and federal standards as applicable. The entire project is within 200 feet from Lake Sammamish and therefore, is entirely within the Shoreline Overlay District. No vegetation is proposed for removal. A restoration plan is included in the application. No structures will exceed the maximum height limitations. The proposal is in conformance with the City's Master Program and applicable ordinances and policies. See decision criteria for further analysis. The proposal will be required to obtain a clearing and grading permit where the final Construction Stormwater Pollution Prevention Plan will be reviewed for compliance with the clearing and grading regulations. Approval and permit issuance will be verification of compliance with applicable regulations. No dead storage of watercraft is proposed. No herbicides, pesticides and/or fertilizers are proposed for use and the applicant will be required to provide information to this effect as part of the clearing and grading permit. No new development requiring storm or sewer drainage facilities is proposed.

E. Shoreline Stabilization, Including Existing Bulkheads.

Shoreline stabilization is allowed in the shoreline critical area and shoreline critical area buffer in compliance with this subsection E. The requirements of this subsection E may be modified through a critical areas report, LUC [20.25H.230](#).

The applicant has provided a Critical Areas Report, see Attachment 2 for a discussion of the modified standards proposed.

G. Clearing and Grading Regulations.

1. All clearing, grading, excavating, and fill in the Shoreline Overlay District shall comply with the provisions of Chapter [23.76](#) BCC, now or as hereafter amended.
2. No clearing, grading, excavating, or fill shall be allowed within the shoreline critical area or shoreline critical area buffer except as permitted by this Part [20.25E](#), or in association with activities allowed under Part [20.25H](#) LUC.

3. Wherever the City determines that the act or intended act of clearing, grading, excavation or fill has become or will constitute a hazard to life or limb, or endangers property, or adversely affects the safety, use of, or stability of a public way, drainage channel or natural stream corridor, including siltation and sedimentation therein, the owner of the property upon which the clearing, excavation or fill is located or other person or agent in the City shall, within the period specified therein, terminate such clearing, grading, excavation, embankment or fill, or eliminate the same from the development plan, or modify the plans, as may be required so as to eliminate the hazard and be in conformance with the requirements of this Code.

The proposal will be required to obtain a clearing and grading permit and can demonstrate compliance with these performance standards as part of that review. The proposal does not constitute a hazard as proposed.

Performance standards for habitat associated with species of local importance

LUC 20.25H.165 Critical areas report – Additional provisions.

In addition to the general critical areas report requirements of LUC [20.25H.230](#), critical areas reports to modify the performance standards for habitat for species of local importance must meet the requirements of this section.

A. Habitat Assessment.

A habitat assessment is an investigation of the site to evaluate the potential presence or absence of designated species of local importance or habitat for species of local importance. A critical areas report for habitat for species of local importance shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:

1. Detailed description of vegetation on and adjacent to the site;
2. Identification of any species of local importance that have a primary association with habitat on or adjacent to the site, and assessment of potential project impacts to the use of the site by the species;
3. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site;
4. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;
5. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC [20.25H.215](#); and
6. A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.

The applicant has submitted to the City a Critical Areas report (see Attachment 2). The report meets the standards required by this section and discusses the projects direct and indirect impacts to habitat. The finds that the project is Not Likely to Adversely Affect (NLAA) listed species or habitat associated with species of local importance.

C. Consistency with Critical Areas Report LUC 20.25.230.

The applicant supplied a complete critical areas report prepared by The Watershed Company, a qualified professional. The report met the minimum requirements in LUC 20.25H.250 (See Attachment 2).

IV. Public Notice and Comment

Application Date:	June 6, 2013
Public Notice (500 feet):	July 3, 2013
Minimum Comment Period:	July 24, 2013

The Notice of Application for this project was published in the City of Bellevue weekly permit bulletin on July 3, 2013. It was mailed to property owners within 500 feet of the project site. No comments have been received from the public as of the writing of this staff report.

V. Summary of Technical Reviews

Clearing and Grading:

The Clearing and Grading Division of the Development Services Department has reviewed the proposed development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

A. Earth and Water

A temporary erosion and sedimentation control plan will be required as part of the required clearing and grading project plans. The proposal does include a planting plan for restoring the site after construction. Erosion and sediment control best management practices include the installation of silt fencing around the work area and covering exposed soils to prevent migration of soils to the lake will be required. The applicant will also be required to submit information regarding the use of pesticides, insecticides, and fertilizers to avoid impacts to water resources. See Section X for a related condition of approval.

B. Animals

The project site is adjacent to Lake Sammamish. The lake and shoreline contain habitat for fish and wildlife species including salmonids and a variety of bird species. The proposed work includes the removal of in-water structures and the installation of native plants along the lake shoreline. No impacts are anticipated since no significant trees will be removed and an improvement of shoreline function will be provided through the removal of shoreline hardening and in-water structures in the near shore environment.

C. Plants

Mitigation for temporary and permanent disturbance will be approved pursuant to an approved re-vegetation and monitoring plan. See Section X for related conditions of approval.

D. Noise

The site is adjacent to single-family residences whose residents are most sensitive to disturbance from noise during evening, late night and weekend hours when they are likely to be at home. Construction noise will be limited by the City's Noise Ordinance (Chapter 9.18 BCC) which regulates construction hours and noise levels. See Section X for a related condition of approval.

VII. Changes to proposal as a result of City review

The applicant revised the original plans by removing the proposed block wall and instead proposing to install more native planting,

VIII. Decision Criteria

A. Shoreline Substantial Development Permit Decision Criteria 20.30R

The Director of Planning and Community Development may approve or approve with modifications if:

1. The applicant has carried the burden of proof and produced evidence sufficient to support the conclusion that the application merits approval or approval with modifications; and

Finding: The applicant has submitted a complete proposal and documentation to support their request to construct the shoreline improvements.

2. The applicant has demonstrated that the proposal complies with the applicable decision criteria of the Bellevue City Code; and

Finding: The applicant has demonstrated compliance with City codes. See discussion in Section III for further information.

3. The applicant has demonstrated that the proposal is consistent with the policies and procedures of the Shoreline Management Act and the provisions of Chapter 173-14 WAC and the Master Program.

Finding: The project is consistent with the following specific Master Program policies:

POLICY SH-13. Protect and improve wildlife and aquatic habitats, particularly spawning waters.

POLICY SH-16. Discourage structures using materials which have significant adverse physical or chemical effects on water quality, vegetation, fish, and wildlife in or near the water.

POLICY SH-48. Encourage the use of vegetation, cobbles, and gravels for stabilizing the water's edge from erosion over the use of bulkheads. Where bulkheads are used, their design should reduce the transmission of wave energy to other properties.

The proposal is consistent with the Comprehensive Plan Policies that make up the city's Shoreline Master Program. The proposal includes the use of vegetation, and soft stabilization measures at the water's edge.

B. Critical Areas Report Decision Criteria- General Criteria LUC 20.25H.255

The Director may approve, or approve with modifications, the proposed modification where the applicant demonstrates:

1. The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code;

Finding: The current condition of the lake shoreline is significantly altered from a natural fully functioning condition. The water's edge is armored, void of significant vegetation, and contains several abandoned in water structures. The proposal will provide for an increase in functions and values because the shoreline will be softened and abandoned structures will be removed.

2. Adequate resources to ensure completion of any required mitigation and monitoring efforts;

Finding: A maintenance and monitoring report is included along with the Critical Areas Report. The maintenance and monitoring plan is adequate to ensure the completion of the restoration plan. At time of the clearing and grading permit a cost estimate for the planting will be required and a planting plan that shows all plants to be installed as required by this decision. Part of the permit inspection process will include an inspection by Land Use staff to ensure the planting is installed. The applicant will be required to provide a performance assurance device for the required mitigation measures associated with the proposed development **See Conditions of Approval in Section X of this report.**

3. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

Finding: The functions and values of the critical areas and critical area buffers on adjacent properties will be unaffected by the actions in the proposal. As discussed in Section III of this report, the applicable performance standards are being met.

4. The resulting development is compatible with other uses and development in the same land use district.

Finding: The proposed development is compatible with other residential land use in the vicinity.

C. Critical Areas Land Use Permit Decision Criteria 20.30P

The Director may approve or approve with modifications an application for a critical areas land use permit if:

1. The proposal obtains all other permits required by the Land Use Code;

Finding: The proposal is required to obtain a clearing and grading permit to perform the proposed activity. At this time the city will review all final sediment control and water quality protection plans. The city will require that all other state and federal approvals (as applicable) have been obtained before the clearing and grading permit is issued.

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Finding: No new in-water improvements or encroachments are proposed. Several in-water structures are to be removed and the existing concrete ramp and concrete rubble bulkhead will be replaced with safer and more stable materials. The repair is the minimum necessary with the least impact on the critical area and buffer.

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

Finding: The applicant has demonstrated compliance with the applicable performance standard as discussed in Section III.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

Finding: The property is currently served by adequate public facilities. The proposal will not change the need for public facilities in the area.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: The proposed project includes a restoration and enhancement plan to install native vegetation along the shoreline consistent with the requirements of 20.25H.210.

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section III and V of this report, the proposal complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of the Development Services Department does hereby **approve with conditions** the proposal to remove a concrete retaining wall and paving at the ordinary high water mark, and removal of steel railings, a log breakwater and a personal watercraft lift in the water. New ramp, boulder outcroppings, a block wall, and stone pavers are proposed improvements within the shoreline buffer.

Note- Expiration of Approval: In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Clearing and Grading Permit or other necessary development permits within one year of the effective date of the approval.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

<u>Applicable Ordinances</u>	<u>Contact Person</u>
Clearing and Grading Code- BCC 23.76	Savina Uzunow, 425-452-7860
Land Use Code- BCC 20.25H	Heidi M. Bedwell, 425-452-4862
Noise Control- BCC 9.18	Heidi M. Bedwell, 425-452-4862

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. **Clearing and Grading Permit** Approval of this Critical Areas Land Use Permit and Shoreline Substantial Development Permit does not constitute an approval of a development permit. The applicant shall be required to submit for a clearing and grading permit prior to construction or removal of any structures in the shoreline buffer.

Authority: Land Use Code 20.30P.140

Reviewer: Heidi M. Bedwell, Development Services Department

2. **Restoration Plan** As part of the required clearing and grading permit, the applicant shall submit a final restoration plan in conformance with the plan approved with this decision.

Authority: Land Use Code 20.25H.220

Reviewer: Heidi M. Bedwell, Land Use

3. **Maintenance and Monitoring Plan** As part of the required clearing and grading permit, the applicant shall submit a final 3 year maintenance and monitoring plan that includes the performance standards as proposed in the Critical Areas Report (Attachment 2).

The reports, along with a copy of the planting plan, can be sent to Heidi Bedwell at hbedwell@bellevuewa.gov or to the address below:

Heidi Bedwell, Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

Authority: Land Use Code 20.25H.220

Reviewer: Heidi M. Bedwell, Development Services Department

4. **Performance Assurance Device** In order to ensure adequate resources are available to implement the required restoration and enhancement plan, a performance assurance device in an amount equal to 100% of the cost of labor and materials for the landscape installation shall be held until of successful installation is verified by the City of Bellevue at which time the performance assurance device will be released to the applicant.

Authority: Land Use Code 20.25H.210

Reviewer: Heidi Bedwell, Development Services Department

5. **Maintenance Assurance Device** In order to ensure the required landscape restoration successfully establishes on the slope, a maintenance assurance device in an amount equal to 25% of the cost of labor and materials for the landscape installation shall be held for a period of three years from the date of successful installation. The maintenance assurance device will be released to the applicant upon receipt of documentation of reporting successful establishment in compliance with the performance standards.

Authority: Land Use Code 20.25H.210

Reviewer: Heidi Bedwell, Development Services Department

6. **Land Use Inspection:** Following installation of planting the applicant shall contact Land Use staff to inspect the planting area prior to final building inspection. Staff will need to find that the plants are in a healthy and growing condition.

Authority: Land Use Code 20.30P.140

Reviewer: Heidi Bedwell, Development Services Department

7. **Rainy Season restrictions:** Due to the proximity to Lake Sammamish, no clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Savina Uzunow, Clearing and Grading

8. **Pesticides, Insecticides, and Fertilizers:** The applicant must submit as part of the required Clearing and Grading Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

Authority: Land Use Code 20.25H.220.H
Reviewer: Heidi M. Bedwell, Land Use

9. **State and Federal Permits:** Any permits from the State or US Army Corps shall be obtained. All required permits and approvals must be received by the applicant and presented to the City prior issuance of the building permit. Potential permits under a JARPA include Hydraulic Permit Approval (HPA) and Section 401 Water Quality Certification from the State and Section 10 and Section 404 approvals from the US Army Corps of Engineers.

Authority: Land Use Code 20.25E.080
Reviewer: Heidi M. Bedwell, Development Services Department

10. **Noise Control:** Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

Authority: Bellevue City Code 9.18
Reviewer: Heidi M. Bedwell, Land Use

City of Bellevue Submittal Requirements	27
ENVIRONMENTAL CHECKLIST	
12/21/00	
<p><i>Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.</i></p>	
<p>INTRODUCTION Purpose of the Checklist:</p> <p>The State Environmental Policy Act (SEPA), chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.</p> <p>Instructions for Applicants:</p> <p>This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.</p> <p>Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you. 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. Include references to any reports or studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.</p> <p>Use of a Checklist for Nonproject Proposals: <i>A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.</i></p> <p>For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.</p> <p>For nonproject actions, the references in the checklist to the words <i>project</i>, <i>applicant</i>, and <i>property</i> or <i>site</i> should be read as <i>proposal</i>, <i>proposer</i>, and <i>affected geographic area</i>, respectively.</p> <p>Attach an 8½" x 11" vicinity map which accurately locates the proposed site.</p>	

ENVIRONMENTAL CHECKLIST

12/21/00

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

BACKGROUND INFORMATION

Property Owner: **Chris and Jacquelyn Carr**
4000 W Lake Sammamish Parkway SE
Bellevue, WA 98008

Contact Person: **Kenny Booth, The Watershed Company**
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **750 6th Street South, Kirkland, WA 98033**

Phone: **(425) 822-5242**

Proposal Title: **Carr Residence**

Proposal Location (Street address and nearest cross street or intersection) Provide a legal description if available:

Street Address:
4000 W Lake Sammamish Parkway SE
Bellevue, WA 98008

Parcel:
1324059031

Legal Description:
THAT PORTION OF GOVERNMENT LOT FOUR (4), SECTION TWELVE (12), TOWNSHIP TWENTY-FOUR (24) NORTH, RANGE FIVE (5) E., W.M., AND OF GOVERNMENT LOT 1 (1), SECTION THIRTEEN (13), TOWNSHIP TWENTY-FOUR (24) NORTH, RANGE FIVE (5) E., W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTH LINE OF THE NORTH 100 FEET OF SAID GOVERNMENT LOT 1, SAID SECTION 13, WITH THE EAST MARGIN OF THE COUNTY ROAD; THENCE NORTH 35°46'00" WEST ALONG SAID EAST MARGIN OF COUNTY ROAD, 69 FEET; THENCE NORTH 69°57'30" EAST 196 FEET, MORE OR LESS, TO THE SHORE OF LAKE SAMMAMISH; THENCE SOUTHERLY ALONG SAID SHORE OF THE LAKE SAMMAMISH 135 FEET, MORE OR LESS, TO THE SOUTH LINE OF THE NORTH 100 FEET OF SAID GOVERNMENT LOT 1, SAID SECTION 13; THENCE WEST ALONG THE SOUTH LINE OF THE SAID NORTH 100 FEET OF GOVERNMENT LOT 1, SAID SECTION 13, TO THE POINT OF BEGINNING, TOGETHER WITH SHORELANDS OF THE SECOND CLASS FRONTING THEREON.

Please attach an 8½" X 11" vicinity map that accurately locates the proposal site. **See last page.**

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Give an accurate, brief description of the proposal's scope and nature:

General description:

The proposed project includes modifications and improvements to the shoreline area. Improvements include upland modifications as well as removal of several in-water structures. Within the hardened area along the northern end of the shoreline, the existing concrete area will be replaced with brick paving and the vertical concrete bulkhead will be skim-coated. The boathouse will remain in its existing configuration with minor repair work proposed to the exterior and interior. The concrete stairs that lead from the lawn to this area will be replaced by a series of larger brick pads spaced a few feet apart. The concrete ramp that extends toward the water from this area will be removed and replaced by a staircase and accompanying ramp on the landward side. The stairs will extend no more waterward than the existing concrete ramp. The concrete rubble bulkhead currently positioned between the ramp and the vertical concrete bulkhead will be removed and replaced with a boulder outcropping.

Moving southward, the set of concrete rubble retaining walls will be removed to allow for a larger beach area. A single block wall will be constructed to provide for the grade change between the beach and the upland lawn area. Stone pavers will provide access through the wall to the beach. An additional set of stepping stones will provide access to the beach along the southern property line. Minimal existing vegetation will be removed to make way for the improvements and includes primarily ornamental shrubs. New plantings are proposed adjacent to the shoreline, both above and below the OHWM, along the shoreline property line. Plantings are also proposed slightly upland of the OHWM near the middle of the site. A total of 612 square feet of plantings are proposed and will consist of native trees, shrubs, and groundcover. Species include paper birch, shore pine, pacific willow, oceanspray, wild clustered rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, common rush, daggerleaf bulrush, and harstem bulrush.

In-water work includes the removal of the steel railings connected to the boathouse, the log breakwater attached to three steel pilings along the north property line, and the personal water craft cradle positioned near the middle of the shoreline. In addition to the removal of these items, the existing metal moorage cover will be removed and replaced with a Polycarbonate clear plastic covering, matching the dimensions of the existing cover.

1. Acreage of site: **The entire parcel is 18,850 square feet (.4327 acre)**
2. Number of dwelling units/buildings to be demolished: **None.**
3. Number of dwelling units/buildings to be constructed: **None.**
4. Square footage of buildings to be demolished: **None.**
5. Square footage of buildings to be constructed: **None.**
6. Quantity of earth movement (in cubic yards): **61 cy cut / 32 cy fill**
7. Proposed land use: **No changes are proposed to the existing land use.**
8. Design features, including building height, number of stories, and proposed exterior materials: **Not applicable.**
10. Other

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Estimated date of completion of the proposal or timing of phasing:

It is anticipated that construction activities would begin in late summer 2013 and conclude sometime in the fall of 2013.

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

None at this time.

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

Critical Areas Report: Carr Residence, Bellevue, WA. The Watershed Company. June 2013

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

No other applications are pending for government approvals of other proposals directly affecting the subject property.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

- Critical Areas Land Use Permit, City of Bellevue
- Shoreline Substantial Development Permit, City of Bellevue
- Clearing and Grading Permit, City of Bellevue
- Hydraulic Project Approval, Washington Department of Fish and Wildlife
- Corps of Engineers – Section 404 Permit
- Corps of Engineers – Section 10 Permit
- Department of Ecology – Section 401 Water Quality Certification

Please provide one or more of the following exhibits, if applicable to your proposal. (Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone)
Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development
Preliminary plat map
- Clearing & Grading Permit
Plan of existing and proposed grading
Development plans
- Building Permit (or Design Review)
Site plan

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Clearing & grading plan

- Shoreline Management Permit
Site plan

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A. ENVIRONMENTAL ELEMENTS

1. EARTH

- a. General description of the site (circle one): Flat Rolling Hilly Steep slopes Mountains Other:
Shoreline

- b. What is the steepest slope on the site (approximate percent slope)?

The site is essentially flat.

- c. 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 prime farmland.

According to Natural Resources Conservation Service (NRCS) soil maps, the property contains Kitsap silt loam, 15 to 30 percent slopes.

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

There are no indications of unstable soils.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Cut: 61 CY, includes concrete slab, brickwall, rock wall, rubble wall

Fill: 32 CY, includes boulders, retaining wall, pavers, steps

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

Some minor erosion could occur during the removal of existing retaining walls. However, BMPs would be incorporated to minimize impacts during all clearing and grading activities.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Total impervious surfaces will decrease by approximately 460 square feet.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

All clearing and grading construction would be in accordance with City of Bellevue Clearing & Grading Code (Chapter 23.76), permit conditions, and all other applicable codes, ordinances, and standards. As needed, the applicant will install temporary erosion and sedimentation control measures such as silt fencing. A silt fence would be installed around exposed soils as necessary to prevent silt-laden water from leaving the site during rainfall events.

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2. AIR

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Emissions from vehicle trips and construction equipment would occur for a short period of time during site construction. After project completion, there would be no change in emissions from existing conditions.

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

No off-site sources of emissions or odor would affect the proposal.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Vehicles and construction equipment would be kept in good working order.

3. WATER

- a. Surface:

- 1) 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.

Lake Sammamish.

- 2) 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.

The entirety of the proposed project will occur within 200 feet of the Lake Sammamish shoreline.

- 3) 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 fill material.

**Approximately 3 CY of concrete and rubble will be removed from below the OHWM.
Approximately 1 cubic yard of boulders will be placed below the OHWM.**

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

The proposal would not require surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes, the proposal lies within a 100-year floodplain.

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

The proposal does not involve any discharges of waste materials to surface waters.

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b. Ground

1. Will ground water be withdrawn, or will water be discharged to ground water? Give a general description, purpose, and approximate quantities if known.

No withdrawal of ground water or discharge of water to ground water would occur as part of this project.

- 2) 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.

No waste material from septic tanks or other sources would be discharged into the ground as part of this project.

c. Water runoff (including stormwater):

1. 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.

Runoff from the immediate project site is not expected except at natural, near pre-project rates. In general, precipitation is expected to infiltrate into beach material and vegetated soils. Any runoff from heavy storms would be directed immediately into Lake Sammamish either overland or by inflow through gravels. Further, any runoff from the completed project area would be "clean" and would have no effect on water quality or quantity in Lake Sammamish.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials would not enter ground or surface waters due to water runoff.

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The erosion control measures described under question 1h would be implemented as necessary.

4. PLANTS

- a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
 evergreen tree: fir, cedar, pine, other
 shrub:
 pasture
 crop or grain
 wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other:
 water plants: water lily, eelgrass, milfoil, other
 other types of vegetation: grass

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

Lawn grass and ornamental shrubs will be removed as part of the project.

- c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be on or near the site.

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

The proposal involves the planting of approximately 612 square feet of native vegetation on the project site. Proposed plantings will include native trees, shrubs, and groundcover. Species include paper birch, shore pine, pacific willow, oceanspray, wild clustered rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, common rush, daggerleaf bulrush, and harstem bulrush.

5. ANIMALS

- a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other

- b. List any threatened or endangered species known to be on or near the site.

Adult and juvenile Chinook salmon and steelhead trout (listed as Threatened under the Federal Endangered Species Act) migrate through Lake Sammamish. Adults migrate upstream to reach spawning grounds in Issaquah Creek and Lake Sammamish tributaries; juveniles migrate downstream from their natal streams to reach the ocean. Lake Sammamish also contains coho salmon (Species of Concern under the Federal Endangered Species Act). Lake Sammamish potentially contains bull trout, a salmonid listed as Threatened under the Federal Endangered Species Act.

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

As described above, adult and juvenile salmon migrate up and downstream, respectively, through Lake Sammamish. Migrating waterfowl may use the lake as resting and foraging areas during spring and fall migrations.

- d. Proposed measures to preserve or enhance wildlife, if any:

The proposed project will enhance wildlife habitat through the installation of approximately 612 square feet of native plantings adjacent to the shoreline. Additionally, the removal of several in-water structures will result in an overall increase in shoreline functions.

6. ENERGY AND NATURAL RESOURCES

- a. 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.

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There is no proposed change in the existing forms of energy currently used for the residence.

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

The project would not affect the potential use of solar energy by adjacent properties.

- c. 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:

No changes to energy features are proposed.

7. ENVIRONMENTAL HEALTH

- a. 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.

Typical environmental hazards associated with residential construction work (e.g. risk of fire, spills) could occur as part of this proposal.

- 1) Describe special emergency services that might be required.

Special emergency services are not anticipated at the site. In the unlikely event that a serious accident (e.g. fire or spill) occurs, local fire department or emergency medical services might be required. After project completion, no special emergency services, other than those typically associated with residential uses, might be required.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

During construction, standard precautions would be taken to ensure the safety of the work crew. Safety and accident response supplies would be on site. The construction manager would be contacted by a crew member immediately upon discovery of a spill. The construction manager would then ensure that the spill is cleaned up in the appropriate manner and would contact the appropriate authorities.

- b. Noise

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

Typical noise associated with adjacent traffic exists in the project area.

- 2) 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.

Noise associated with project construction would be restricted to use of excavating and hauling equipment. Construction noise would be limited to normal daytime working hours. There would be no long-term noise associated with the completed project, other than that associated with a typical shoreline residential property.

- 3) Proposed measures to reduce or control noise impacts, if any:

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12. RECREATION

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

In the immediate vicinity, Lake Sammamish provides recreational activities such as swimming, boating, and fishing. Approximately 375 feet to the west of the subject parcel, separated by other single-family residences and W Lake Sammamish Parkway SE, is 41.5 Mini Park.

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

The proposed project would not displace any existing recreational uses.

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

No such measures are necessary.

13. HISTORIC AND CULTURAL PRESERVATION

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No such places or objects are known to be on or next to the site.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No such landmarks or evidence is known to be on or next to the site.

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

Should historic, archeological, scientific or culturally significant items be encountered during implementation of this project, work would be temporarily stopped while the appropriate agencies are notified.

14. TRANSPORTATION

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The property takes access from W Lake Sammamish Parkway SE. Site access would not be changed as a result of the proposed project.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The nearest King County Metro transit stop is located approximately 725 feet to the southeast of the subject parcel, at the junction of W Lake Sammamish Parkway SE and SE 40th Place.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

The proposed project would not affect parking on the property.

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- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The proposal would not require any new roads, or improvements to existing roads.

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

Water, rail, or air transportation would not be utilized by the completed project.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Traffic generation would not change as result of the proposed project.

- g. Proposed measures to reduce or control transportation impacts, if any:

No such measures are necessary.

15. PUBLIC SERVICES

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

No increase in public service needs would result from this project.

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

No such measures are necessary.

16. UTILITIES

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

- b. 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.

The site is currently served by utilities. No new utilities are proposed as part of the project.

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

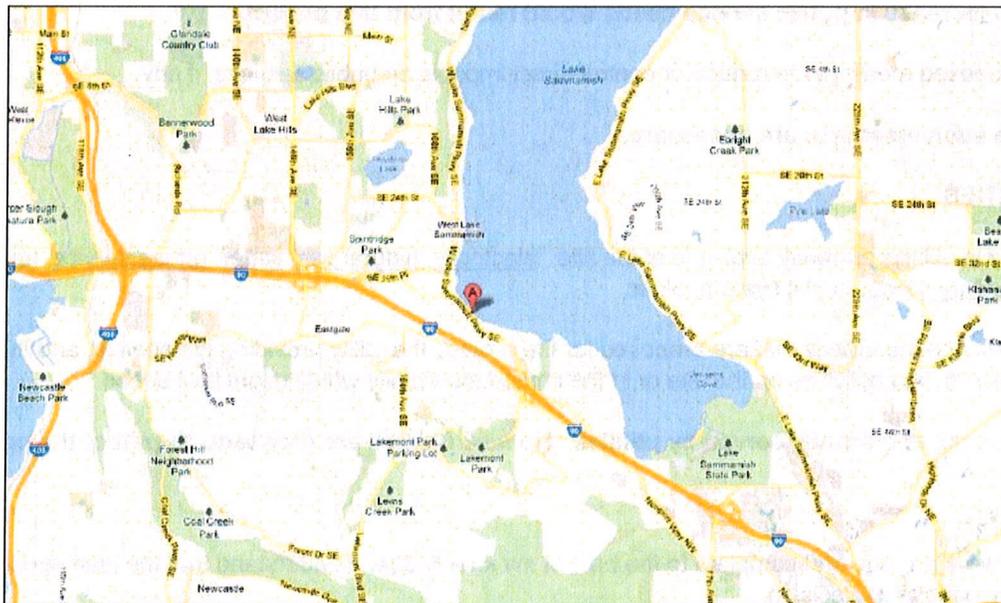


Kenny Booth, AICP
Associate Planner

Date Submitted: _____

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Vicinity Map from iMAP (top) Google Maps (below)



CRITICAL AREAS REPORT

Carr Residence – Bellevue, WA

Prepared for:

Chris and Jacquelyn Carr
2373 NE Park Dr
Issaquah WA 98029

Prepared by:



750 Sixth Street South
Kirkland . WA 98033

p 425.822.5242
f 425.827.8136
watershedco.com

June 2013
Revised November 2013

The Watershed Company
Reference Number:
130331

The Watershed Company Contact Person:
Kenny Booth

Cite this document as:
The Watershed Company. June 2013, Revised November 2013. Critical Areas Report: Carr Residence, Bellevue, WA. Prepared for Chris Carr, Issaquah, WA.

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Appendix A: Restoration Plan

LIST OF EXHIBITS

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Figure 2. View of the shoreline (looking north), including the concrete ramp, the lower portion of which is below the OHWM and in a degraded condition; the PWC cradle in the foreground; the short section of concrete rubble bulkhead; the vertical concrete bulkhead; the boathouse with steel	

railings, and the ramp leading to the dock with adjacent boatlift and moorage cover – photo taken 5-22-13.6

Figure 3. View of the existing shoreline (looking west) – photo taken 5-22-13.....6

Figure 4. View of the existing shoreline (looking south) – photo taken 5-22-13.7

Figure 5. View of the existing dock and covered moorage. The steel piles and log breakwater along the northern property line are also visible – photo taken 5-22-13.7

CRITICAL AREAS REPORT

CARR RESIDENCE – BELLEVUE, WA

1 INTRODUCTION

1.1 Background and Purpose

The purpose of this report is to document potential critical area impacts associated with the proposed residential development project located on the western shore of Lake Sammamish in the City of Bellevue, Washington (Figure 1). The lot presently contains a house (originally built in 1955 and currently undergoing an extensive remodel), a driveway, a boathouse, a boatlift with moorage cover, a series of concrete rubble retaining walls along the shoreline, and a dock.

The applicant proposes to modify portions of the shoreline to improve access, safety, aesthetics, and habitat conditions. Improvements include replacement of an unsafe boat launch/walkway with stairs, removal of various in-water structures, removal of retaining walls, and other hardscape/landscape improvements. Lake Sammamish is considered a critical area by the City of Bellevue. Bellevue Land Use Code (LUC) 20.25H.230 requires compliance with specific critical areas report criteria as part of any modification to a critical area, critical area buffer, or structure setback. This report fulfills these criteria.

1.2 Description of Project Area

The subject property is located at 4000 West Lake Sammamish Parkway SE (parcel 1324059031) in the City of Bellevue. Lake Sammamish borders the site to the east and single family residences are located to the north and south. West Lake Sammamish Parkway SE is located west of the site, with additional single-family residences located west of the roadway. The property slopes downward moderately from West Lake Sammamish Parkway SE toward the lake. The lot presently contains a house (built in 1955) that is undergoing an extensive remodel. The footprint of the pre-existing structure is not being altered.

The middle and southern portion of the shoreline consists of a natural beach area. The beach transitions to a series of concrete rubble retaining walls beginning approximately 10 feet landward of the OHWM. The first wall, which is positioned near the middle of the site and extends for approximately 30 feet, is roughly 1.5 feet in height. It supports a level paved area that includes three concrete benches. Beyond this wall and extending south to the property boundary is an additional concrete rubble wall, two-plus feet in height. This wall provides the break

Vegetation consists of a mixture of native and non-native species. A moderately-sized spruce is located in the southeast corner of the site. Other trees near the shoreline include a dogwood and a shore pine, as well as an apple and plum tree. Shrubs and groundcover include salal, hydrangea, juniper, English laurel, azalea, rhododendron, rose, horsetail, sword fern, English ivy, and Himalayan blackberry.

No wetlands or streams were noted on the property, nor do publicly available data indicate the presence of aquatic areas aside from Lake Sammamish. According to the Natural Resources Conservation Service, the property contains Kitsap silt loam soils, 15 to 30 percent slopes.

Habitat

Habitat structure on property is relatively simple, with one moderately-sized conifer and scattered groups of mixed native and ornamental shrubs providing disconnected patches of mid-story and canopy layer vegetation and little low undergrowth apart from maintained grass. The lack of structural diversity limits food and cover opportunities for most wildlife species. Special features such as snags and large woody debris, which provide habitat for birds, small mammals and herptiles, are not present on the site. There are a few native and non-native fruit producing plants on the site, including apple and plum, which provide a limited food source for songbirds and small mammals. The conifer on site, a spruce, does provide quality perching and nesting opportunities for bald eagles and osprey, which prefer to forage and nest next to large open waters such as Lake Washington. However, this resource is not unique to the site or particularly rare along the shoreline. The subject property is fragmented from large forested areas, with the undeveloped 41.5 Mini Park located over 500 feet to the west.

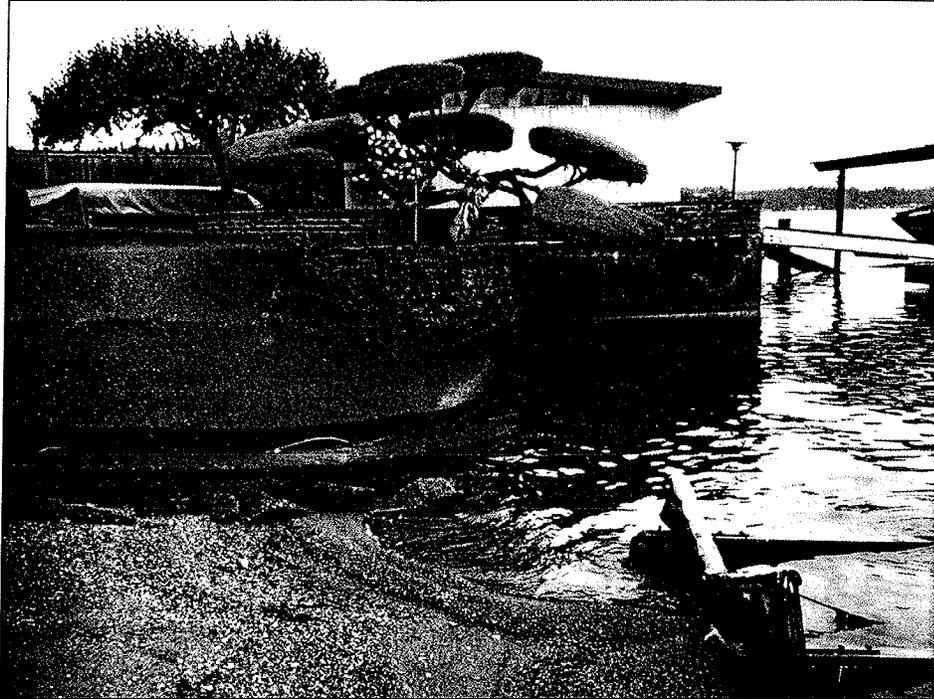


Figure 2. View of the shoreline (looking north), including the concrete ramp, the lower portion of which is below the OHWM and in a degraded condition; the PWC cradle in the foreground; the short section of concrete rubble bulkhead; the vertical concrete bulkhead; the boathouse with steel railings, and the ramp leading to the dock with adjacent boatlift and moorage cover – photo taken 5-22-13.



Figure 3. View of the existing shoreline (looking west) – photo taken 5-22-13.

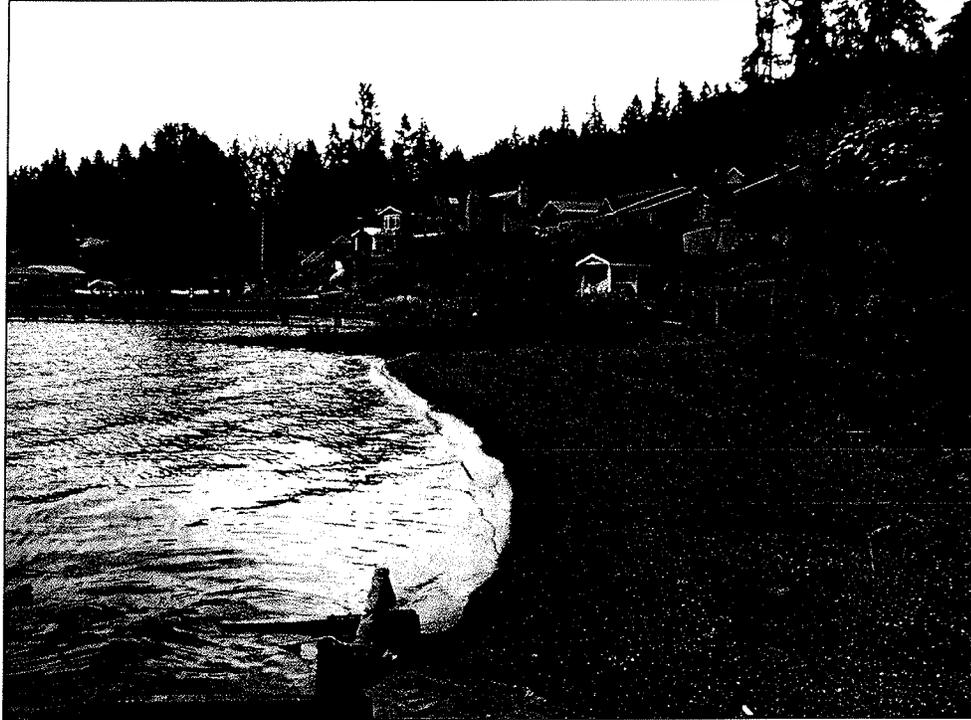


Figure 4. View of the existing shoreline (looking south) – photo taken 5-22-13.



Figure 5. View of the existing dock and covered moorage. The steel piles and log breakwater along the northern property line are also visible – photo taken 5-22-13.

2 LOCAL REGULATIONS

In Bellevue, shoreline areas are governed by Critical Areas Ordinance No. 5680 and regulated specifically by LUC 20.25H.115 and 20.25E. Developed sites on Lake Sammamish require a 25-foot critical area buffer [LUC 20.25H.115(B)(1)(a)(ii)] plus a 25-foot shoreline critical area structure setback [LUC 20.25H.115(C)(2)(b)]. The setback is intended to minimize long-term impacts of development and protect the critical area from adverse impacts during construction.

Shoreline buffers and shoreline setbacks can only be modified through an approved critical areas report. The applicant must demonstrate that the modifications to the buffer and setback, combined with any restoration efforts, will result in equivalent or better protection of critical area functions and values than would result from adhering to the standard application of the regulations (LUC 20.25H.230). Restoration of the critical area may involve restoring the shoreline by removing structures, removing invasive plant species, and/or planting native vegetation within the buffer and/or setback. An approved restoration plan would require monitoring and maintenance in accordance with LUC 20.25H.220.

3 PROJECT DESCRIPTION

The proposed project includes modifications and improvements to the shoreline area. Improvements include upland modifications as well as removal of several in-water structures. Within the hardened area along the northern end of the shoreline, the existing concrete area will be replaced with brick paving and the vertical concrete bulkhead will be skim-coated. The boathouse will remain in its existing configuration with minor repair work proposed to the exterior and interior. The concrete stairs that lead from the lawn to this area will be replaced by a series of larger brick pads spaced a few feet apart. The large concrete ramp that extends toward the water from this area will be removed and replaced by a smaller ramp. The ramp will extend no more waterward than the existing ramp. The concrete rubble bulkhead currently positioned between the ramp and the vertical concrete bulkhead will be removed and replaced with a rounded boulder outcropping.

Moving southward, the set of concrete rubble retaining walls will be removed to allow for a larger beach area. Above the OHWM, natural boulders will be positioned to provide for the grade change between the beach and the upland lawn area. A natural pathway will provide access to the beach along the southern property line. Minimal removal of mainly ornamental, vegetation is proposed to make way for the improvements. New plantings are proposed adjacent to the shoreline, both above and below the OHWM, along the shoreline property line. Plantings are also proposed

slightly upland of the OHWM near the middle of the site. A total of 812 square feet of plantings are proposed and will consist of native trees, shrubs, and groundcover. Species include paper birch, shore pine, pacific willow, oceanspray, pea-fruit rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, soft rush, daggerleaf rush, and hardstem bulrush.

In-water work includes the removal of the steel railings connected to the boathouse, the log breakwater attached to three pilings along the northern property line, and the PWC cradle positioned near the middle of the shoreline. In addition to the removal of these items, the existing metal moorage cover will be removed and replaced with a Polycarbonate clear plastic covering, matching the dimensions of the existing cover.

Project Purpose

The purpose of the proposed project is to modernize the existing shoreline to improve aesthetics as well as access to the shoreline and user safety. The existing shoreline includes many hardened components that are not conducive to safe use of the shoreline, particularly for children. Specifically, the concrete rubble retaining walls do not appear stable and include many sharp edges. The concrete ramp that provides direct access from the hardened area to the beach and water is extremely steep and becomes excessively slippery when wet. Proposed improvements are intended to remedy these safety situations while simultaneously improving shoreline ecological functions by removing unnecessary in-water structures, increasing the size of the beach area, and adding native plantings.

Mitigation Sequencing

Pursuant to LUC 20.25H.215, attempts to avoid and minimize impacts to the on-site shoreline buffer and setback have been taken.

Avoidance: As previously mentioned, the project site includes a 25-foot shoreline buffer and an additional 25-foot structure setback. Proposed improvements include replacement or modification of hardened improvements within the shoreline buffer and setback. No new structures are proposed.

Minimization: Minimization techniques were utilized during the design process in order to limit impacts to the shoreline buffer and setback. Minimization measures included preserving the existing 20-inch diameter spruce tree located near the shoreline and modifying the stair/ramp layout to minimize impacts below the OHWM.

Restoration: In addition to the replacement and modification of existing shoreline improvements, several in-water structures will be removed and native plantings will be added along the shoreline. In-water work removals include the steel railings connected to the boathouse, the log breakwater, and the PWC cradle positioned near the middle of the shoreline. Shoreline plantings will consist of native trees, shrubs and groundcover

throughout portions of the site for a total planted area of 812 square feet. Species include paper birch, shore pine, pacific willow, oceanspray, pea-fruit rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, soft rush, daggerleaf rush, and hardstem bulrush. The planting layout incorporates a diversity of native plant species. The restoration plan will provide for substantially improved critical area and buffer functions relative to the existing condition. A monitoring and maintenance plan is also included in this report. Overall, a net improvement in critical area functions is proposed.

4 IMPACT ASSESSMENT / LIFT ANALYSIS

As mentioned, areas of hardened improvements along the shoreline will be removed and replaced with new improvements. Additionally, several in-water structures will be removed from the site and native plantings will be added along the shoreline. A summary of impacts and proposed restoration is presented in the table below.

Table 1. Impact Assessment

	Lake Sammamish	Shoreline Buffer	Shoreline Setback	Total
Existing Impervious Surfaces (Sq. Ft.)	38	2,112	557	2,707
Proposed Impervious Surfaces (Sq. Ft.)	0	1,462	285	1,747
Existing In-water Structures (Sq. Ft.)	923	0	0	923
Proposed In-water Structures (Sq. Ft.)	779	0	0	779
Restoration Plantings (Sq. Ft.)	212	600	0	812

As can be seen in the above table, impervious surfaces within the critical area, buffer and setback will be reduced from 2,707 square feet to 1,747 square feet, an overall decrease of 960 square feet. Meanwhile an additional 812 square feet of native plantings will be added to the critical area and buffer and 144 square feet of in-water structures will be removed from Lake Sammamish. An analysis of the specific functions and values provided by the existing site and the post-project site is provided in Table 2.

Table 2. Functional Lift Analysis

Critical Area/ Buffer Functions	Existing Conditions	Proposed Conditions	Functional Improvement?
Water Quality	The shoreline area is devoid of significant vegetation capable of filtering stormwater before it enters the lake.	Remove portions of concrete rubble walls and enhance/restore with native trees and shrubs.	Yes; water quality will be improved. New native plantings will help to filter storm water prior to it reaching receiving waters, particularly along the shoreline.
Hydrology	The shoreline area lacks vegetative structure that can slow stormwater velocities discharging into the lake from the lawn and nearby impervious areas.	Restore portions of the shoreline by establishing native shrubs and groundcovers.	Yes; new native plantings will provide increased density and resistance to storm flows, reducing peak stormwater velocities entering the lake.
Habitat	The existing buffer and setback lack the native vegetation necessary to provide substantial forage and cover opportunities. The unnecessary in-water structures provide cover for introduced salmonid predator species.	Remove in-water structures and enhance/restore habitat with native trees and shrubs.	Yes; new native plantings will provide a net increase in species and structural diversity. Further, new plantings will provide organic matter and other allochthonous inputs to the lake. New foraging, perching and nesting opportunities for terrestrial wildlife, including several songbird species will be provided. Removal of the in-water structures will enhance near-shore habitat complexity, and maximize nearshore shallow-water habitat for juvenile salmonids.
Net Condition	Degraded buffer and setback with excessive in-water structures.	Removed in-water structures and enhanced/restored habitat with native trees and shrubs.	Shoreline habitat enhanced with an increase in native vegetation; filtering of stormwater by native plantings; increased habitat structural and compositional complexity, and an increase in organic material to the food chain. In-water habitat is improved through the removal of structures.

The change from existing state to post-project state will represent an increase in the quality of habitat from the perspective of the site potential. Vegetation removal consists largely of ornamental species, grass, and scattered native shrubs. The restoration plan proposes an overall increase in native plantings on-site. The presence of these plants on the site provides greater potential for the site to develop a greater vegetative structure including an expanded canopy/tree component than exists in the impact area presently.

Although a greater footprint will be covered by the proposed development than the existing development, so will a greater area of diverse, native habitat result from the proposal. The property will be more suitable overall for urban songbird, small mammal and herptile species than it is presently; the understory will contain more woody vegetation and a greater structural complexity, which is more attractive to songbirds and small mammals than is lawn and low-growing, homogeneous vegetation. As well, a greater mix of flowering, fruiting and seeding plants will provide forage over a longer yearly timespan than the relatively uniform existing low vegetation. Wildlife species of the Pacific Northwest are also better adapted to forage provided by native plants than non-native and ornamental species. Functional lift specific to the shoreline is presented in Section 6.1

5 CRITICAL AREAS REPORT CRITERIA

As previously mentioned, shoreline buffers and shoreline setbacks may be modified pursuant to LUC 20.25H.230. The Director may approve the modifications described above if it can be shown that, through restoration, the modification will result in equivalent or better protection of critical area functions and values. The existing project site contains areas of low functioning shoreline, as well as a degraded shoreline buffer and setback. Non-native vegetation occupies portions of the buffer and setback while other areas are completely void of vegetation. The shoreline includes several in-water structures that are no longer necessary and will be removed from the site.

Per the LUC, the critical areas report must meet specific decision criteria in order for the Director to approve a proposal to modify the regulated shoreline buffer and structure setback. Compliance with the relevant critical areas report criteria listed in LUC 20.25H.250(B) is addressed below.

3. *Identification of each regulation or standard of this code proposed to be modified.*

The site is adjacent to Lake Sammamish, a regulated shoreline that, pursuant to LUC 20.25H.115(B)(1)(a)(ii) and LUC 20.25H.115(C)(2)(b), requires a 25-foot critical area buffer and a 25-foot shoreline critical area structure setback. The applicant proposes to remove several in-water

structures, replace a concrete ramp and concrete rubble bulkhead, remove concrete rubble retaining walls, and otherwise modify hardscape improvements within the buffer and setback. The proposal complies with the remaining regulations and standards of this code.

4. *An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development.*

In-water work is limited to removal of several structures, as well as the replacement of a concrete ramp and a concrete rubble bulkhead with natural boulders. The overall removal of in-water structures, coupled with proposed native plantings adjacent to the shoreline are expected to provide for an overall increase in critical area functions at the site.

5. *An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this Code, compared with the level of protection provided by the proposal. The analysis shall include:*

- a. *A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;*

The shoreline is presently partially armored and void of significant native vegetation. Minimal water quality and hydrologic function is provided by the existing vegetation. The area waterward of the OHWM includes a variety of structures, including a float, boatlift, PWC cradle, steel railings, and a steel pile/log breakwater. The preponderance of in-water structures limits in-water habitat potential by creating predator-friendly locations. The bulkheaded portion of the site allows only simple habitat to exist in the nearshore area by presenting a vertical interface with the ordinary high water mark. In addition to being a physical shoreline barrier, this limits vegetation establishment and organic input and prevents the formation of quality shallow water habitat.

- b. *A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development;*

The strict application of the regulations and standards of LUC 20.25H would prevent the proposed improvements from being constructed, as the improvements are proposed within portions of the shoreline buffer and structure setback. None of the improvements are 'allowed uses' per LUC

20.25H.055.B. Therefore, the shoreline would remain in its existing condition, as described in the response above.

c. A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development; and

By requesting a critical area modification pursuant to LUC 20.25H.230, the applicant is provided the opportunity to restore and enhance portions of the on-site shoreline critical area, buffer, and setback. A restoration plan has been prepared (see Appendix A) that details the area proposed for restoration. Restoration will involve the enhancement of 812 square feet of the site through the planting of native vegetation within the buffer. The planting layout incorporates a diversity of native plant species. Proposed plantings include trees, shrubs, and groundcover. A monitoring and maintenance plan for the proposed restoration is also included in this report. In addition to areas of plantings, an overall decrease in impervious surfaces within the buffer and setback is proposed. Finally, several non-conforming in-water structures will be permanently removed from the site. Overall, a net gain in critical area functions is proposed. Therefore, modification of the on-site critical areas, and subsequent restoration, will provide a substantially higher level of protection than provided through the application of the regulations of LUC 20.25H.

7. *A discussion of the mitigation requirements applicable to the proposal pursuant to LUC 20.25H.210, and a recommendation for additional or modified mitigation, if any.*

The proposed restoration plan has been developed in accordance with the standards of LUC 20.25H.210 through 20.25H.225. The project applicant proceeded through the design of the proposed project by first attempting to avoid impacts to the on-site critical area, buffer, and setback. However, because strict application of LUC 20.25H would result in the applicant being unable to modify the configuration of the hardscapes within the shoreline buffer, the applicant proceeded with a design that minimized modifications and impacts to the greatest extent possible. Included as part of the plan to modify improvements within buffer and setback is a proposal to remove several in-water structures and restore portions of the shoreline with native plantings. The restoration plan will improve the critical area functions and values relative to the existing condition. A monitoring and maintenance plan for the proposed restoration area has also been prepared and is included in this report. The plan includes the components required by LUC 20.25H.220.

To allow a shoreline buffer and shoreline setback modification through an approved critical areas report, the Director must also find compliance with the decision criteria established in LUC 20.25H.255(A). Compliance with the relevant sections listed in LUC 20.25H.255(A) is addressed below.

1. *The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code.*

See response 5 in the preceding discussion.

2. *Adequate resources to ensure completion of any required mitigation and monitoring efforts.*

A comprehensive three-year maintenance and monitoring plan is included in this report (Section 6). The plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring. This will ensure that restoration plantings will be maintained, monitored, and successfully established within the first three years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the three-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to building permit issuance.

3. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site.*

The on-site critical area (Lake Washington) continues off-site to the north and south. An on-site decrease in impervious surfaces, as well as an overall decrease of in-water structures will not have a detrimental impact on off-site areas of the critical areas. In fact, on-site improvements will have a beneficial affect on the subject property and a small cumulative improvement to the overall habitat function of the resource.

4. *The resulting development is compatible with other uses and development in the same land use district.*

The existing single-family residence will remain compatible with adjacent properties and surrounding development within the same land use district (Single Family R-1.8). Adjacent properties also contain single-family land uses, all of a similar size and character.

Modification of a critical area requires the applicant to apply for and receive a Critical Areas Land Use Permit. Before issuing a Critical Areas Land Use Permit, the Director must find that the project meets specific decision criteria. Compliance with the applicable Critical Areas Land Use Permit decision criteria listed in LUC 20.30P.140 is addressed below.

- A. *The proposal obtains all other permits required by the Land Use Code.*

The project applicant has applied for a Critical Areas Land Use Permit (LO) to modify the on-site shoreline buffer and setback. An application for a Shoreline Substantial Development Permit (WG) has also been submitted. No other City of Bellevue land use permits will be required of the project at this time. A Building Permit or Clearing and Grading will be applied for after approval of the LO and WG.

- B. *The proposal utilizes to the maximum extent possible the best available construction, design and development techniques, which result in the least impact on the critical area and critical area buffer.*

No new in-water improvements or encroachments are proposed. Several in-water structures are to be removed and the existing concrete ramp and concrete rubble bulkhead will be replaced with safer and more stable materials. These design parameters represent the minimum necessary impact to the critical area and buffer.

- D. *The proposal will be served by adequate public facilities including streets, fire protection, and utilities.*

The proposed project will be served by adequate public facilities. No new streets will be needed to serve the site and the project site will utilize existing utilities available to the site. Additionally, fire and police protection are currently available at the site.

- E. *The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan.*

A restoration plan has been prepared in accordance with the requirements of LUC 20.25H.210. See Section 6 and Appendix A.

- F. *The proposal complies with other applicable requirements of this code.*

The proposed project complies with all other applicable City of Bellevue Land Use Codes.

6 RESTORATION PLAN

6.1 Overview

The proposed restoration plan fulfills the requirements of LUC 20.25H.220(B). The plan seeks to restore and enhance portions of the Lake Sammamish shoreline buffer and setback. To achieve this, the plan calls for the enhancement of 812 square feet of the site through the planting of native trees, shrubs and groundcover within the shoreline buffer and setback. Species include paper birch, shore pine, pacific willow, oceanspray, pea-fruit rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, soft rush, daggerleaf rush, and hardstem bulrush.

6.2 Maintenance and Monitoring Plan

A 3-year maintenance and monitoring plan is proposed to ensure and document the plan meets performance standards.

Goals

- 1) Within the proposed restoration areas, establish dense native vegetation that is appropriate to the eco-region and site.
- 2) Where indicated on the plan, planted restoration areas will remain substantially vegetated with a preponderance of native plants and will contain little invasive or noxious weed cover.
- 3) Increase habitat cover, refuge and food resources for herptiles, small mammals, and invertebrates. In addition to cover and food resources, provide perching habitat for native birds.

Performance Standards

The standards listed below will be used to judge the success of the installation over time. If performance standards are met at the end of Year 3, the site will then be deemed successful and the performance security bond will be eligible for release by the City of Bellevue.

- 1) Survival: Achieve 100% survival of installed plants by the end of Year 1. This standard can be met through plant establishment or through replanting as necessary to achieve the required numbers.

- 2) Species diversity: Establish at least four native woody species by Year 3. Native volunteer species may count towards this standard. Establish at least one native coniferous tree species (minimum two individuals) and at least one native deciduous tree species (minimum 4 individuals). Establish at least three native emergent species (minimum patch size of 30 square feet unless significantly intermixed).
- 3) Native cover:
 - a. Within shrub- and tree-planted areas, achieve 40% cover of native shrubs and sapling trees by Year 2. Native volunteer species may count towards this cover standard.
 - b. Within shrub- and tree-planted areas, achieve 60% cover of native shrubs and sapling trees by Year 3. Native volunteer species may count towards this cover standard.
 - c. Within emergent-planted areas, achieve 80% understory cover of native emergent species by Year 3. Native volunteer species may count towards this cover standard.
- 4) Invasive cover: Aerial cover for all non-native, invasive and noxious weeds will not exceed 10% at any year during the monitoring period. Invasive plants include Himalayan blackberry (*Rubus armeniacus*), cut leaf blackberry (*Rubus laciniatus*), cherry (hedge) laurel (*Prunus laurocerasus*), purple loosestrife (*Lythrum salicaria*), yellow-flag iris (*Iris pseudacorus*), reed canarygrass (*Phalaris arundinacea*), morning glory/bindweed (*Convolvulus arvensis*), English holly (*Ilex aquifolium*), and ivy species (*Hedera* spp.).

Monitoring Methods

This monitoring program is designed to track the success of the mitigation site over time and to measure the degree to which it is meeting the performance standards outlined in the preceding section.

An as-built plan will be prepared by the restoration professional (Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects) prior to the beginning of the monitoring period. The as-built plan will be a mark-up of the planting plans included in this plan set. The as-built plan will document any departures in plant placement or other components from the proposed plan.

Monitoring will take place once annually in the fall for three years. Year-1 monitoring will commence in the first fall subsequent to successful installation as documented in the as-built plan.

The formal monitoring visit shall record and report the following in an annual report submitted to the City of Bellevue:

- 1) Visual assessment of the overall site.
- 2) Year-1 counts of live and dead woody plants by species. Year 1 survival estimates of emergent species.
- 3) Counts of dead plants where mortality is significant in any monitoring year.
- 4) Estimate of native woody species cover.
- 5) Estimate of non-native, invasive weed cover.
- 6) Tabulation of established native species, including both planted and volunteer species.
- 7) Photographic documentation from at least three fixed reference points.
- 8) Any intrusions into or clearing of the planting areas, vandalism, or other actions that impair the intended functions of the mitigation area.
- 9) Recommendations for maintenance or repair of any portion of the mitigation area.

Construction Notes and Specifications

Note: specifications for items in **bold** can be found below under "Material Specifications and Definitions."

Note: The Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects, will monitor:

- 1) All site preparation
 - a) Soil preparation.
 - b) Mulch placement.
- 2) Plant material inspection
 - a) Plant material delivery inspection.
 - b) 100% plant installation inspection.

General Work Sequence

- 1) All plant installation is to take place during the dormant season (September 15th – December 15th), for best survival.
- 2) Prepare a planting pit for each plant and install per the planting details.
- 3) Mulch the entire planted area with **wood chip mulch**, four inches thick.
- 4) Install a temporary, above ground **irrigation system** to provide full coverage to all plants within the restoration area.

Material Specifications and Definitions

- 1) **Fertilizer:** Slow release, granular PHOSPHOROUS-FREE fertilizer. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Note that fertilizer is to be applied only in Years 2 and 3 and not in the first year. Do not apply fertilizer to inundated or ponded areas or lakeshore areas that may become inundated.
- 2) **Irrigation system:** Automated system capable of delivering at least one inch of water per week from June 1 through September 30 for the first two years following installation.
- 3) **Restoration Professional:** Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects.
- 4) **Wood chip mulch:** Arborist chips (chipped woody material) approximately 1 to 3 inches in maximum dimension (not sawdust or coarse hog fuel). This material is commonly available in large quantities from arborists or tree-pruning companies. This material is sold as "Animal Friendly Hog Fuel" at Pacific Topsoils [(800) 884-7645]. Mulch must not contain appreciable quantities of garbage, plastic, metal, soil, and dimensional lumber or construction/demolition debris.

Contingencies

If there is a significant problem with the restoration areas meeting performance standards, a contingency plan will be developed and implemented. Contingency plans can include, but are not limited to: soil amendment; additional plant installation; and plant substitutions of type, size, quantity, and location.

Maintenance

The site will be maintained in accordance with the following instructions for three years following completion of the construction.

- 1) Follow the recommendations noted in the previous monitoring site visit.
- 2) General weeding for all planted areas:
 - a. At least twice yearly, remove all competing weeds and weed roots from beneath each installed plant and any desirable volunteer vegetation to a distance of 18 inches from the main plant stem. Weeding should occur at least twice during the spring and summer. Frequent weeding will result in lower mortality, lower plant replacement costs, and increased likelihood that the plan meets performance standards by Year 3.
 - b. More frequent weeding may be necessary depending on weed conditions that develop after plan installation.

- c. Do not weed the area near the plant bases with string trimmer (weed whacker/weed eater). Native plants are easily damaged or killed, and weeds easily recover after trimming.
 - d. Selective applications of herbicide may be needed to control invasive weeds, especially when intermixed with native species. Herbicide application, when necessary, shall be conducted only by a state-licensed applicator. Use only herbicide formulations approved for aquatic areas.
- 3) Apply slow release granular fertilizer to each installed plant annually in the spring (by June 1) of Years 2 and 3. Do not apply fertilizer to inundated or ponded areas or lakeshore areas that may become inundated.
 - 4) Replace mulch as necessary to maintain a 4-inch-thick layer, retain soil moisture, and limit weeds.
 - 5) Replace each plant found dead in the summer monitoring visits during the upcoming fall dormant season (September 15th – December 15th).
 - 6) The homeowner will ensure that water is provided for the entire planted area above the lake level with a minimum of 1 inch of water provided per week from June 1 through September 30 for the first two years following installation through the operation of a temporary irrigation system. Less water is needed during March, April, May and October.

7 SUMMARY

Proposed improvements will occur within the shoreline buffer and structure setback. Improvements include replacement of an unsafe boat launch/walkway with stairs and a ramp, removal of various in-water structures, removal of retaining walls, and other hardscape/landscape improvements. Improvements will result in an overall decrease in impervious surfaces of 960 square feet and the removal of 144 square feet of in-water structures. In addition a total of 812 square feet of site enhancement is proposed. Species include paper birch, shore pine, pacific willow, oceanspray, pea-fruit rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, soft rush, daggerleaf rush, and hardstem bulrush.

The planting layout incorporates a diversity of native plant species. The restoration plan, coupled with an overall decrease in impervious surfaces and the removal of several in-water structures, will provide significantly better protection of those critical area functions and values than would be provided by the standard application of the critical area regulations. Therefore, an overall net gain in critical area buffer functions and values is proposed.



VICINITY MAPS

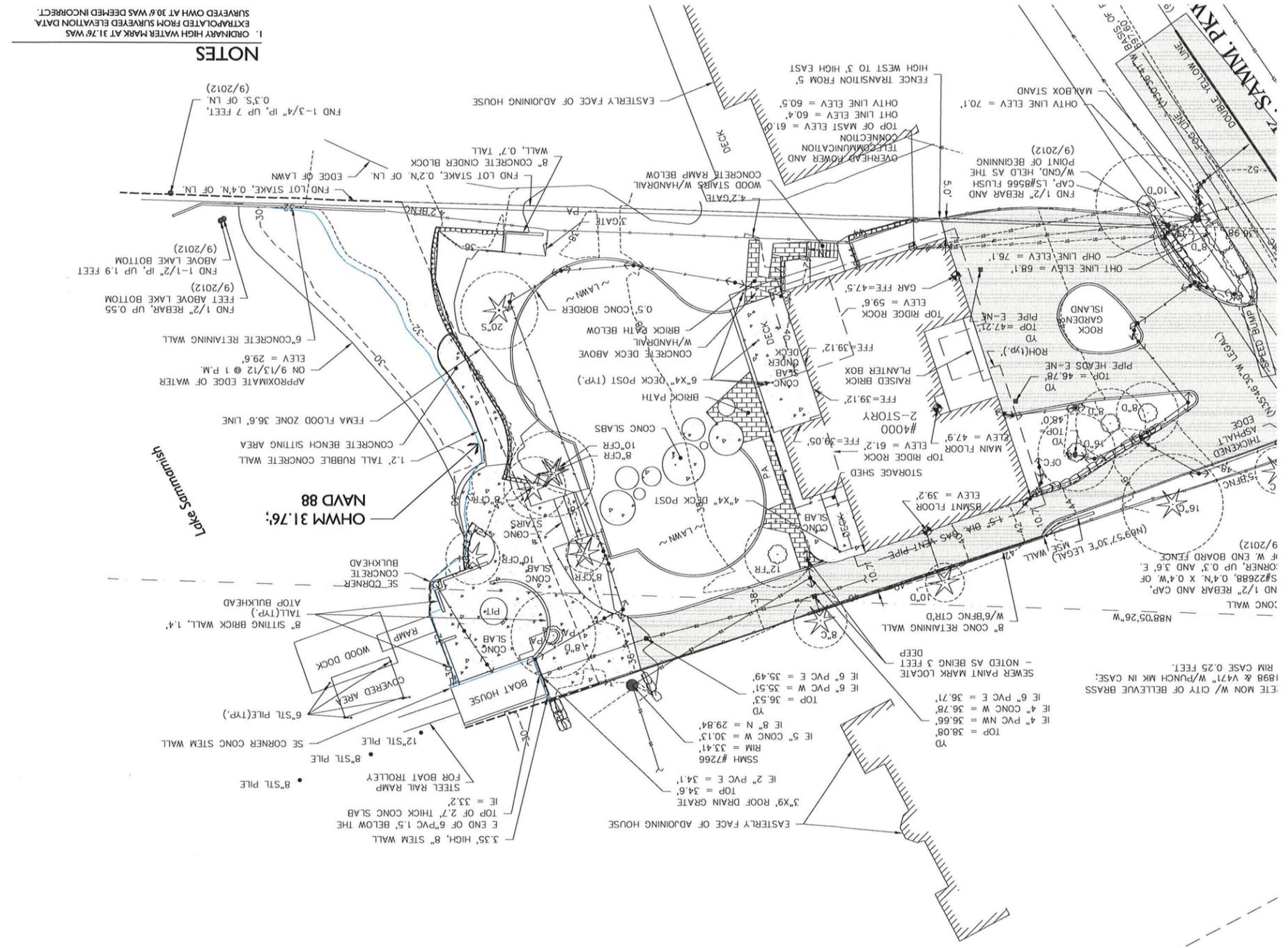
CONTACTS
 CLIENT: CHRIS & JACQUELYN CARR
 4000 WEST LAKE SAMMAMISH PARKWAY SE
 SAMMAMISH, WA 98008
 PHONE:
 PROJECT CONSULTANT: THE WATERSHED COMPANY
 750 6TH ST S
 KIRKLAND, WA 98033
 CONTACT: KENNY BOOTH
 425-822-5242
 PHONE:

SHEET INDEX

1. EXISTING CONDITIONS
2. PROPOSED SITE PLAN
3. IMPACT ASSESSMENT
5. SHORELINE PLANNING PLAN & DETAILS
6. SITE DETAILS, SPECIFICATIONS, MITIGATION NOTES

EXISTING CONDITIONS

SCALE: 1/16" = 1'-0"



NOTES
 1. ORDINARY HIGH WATER MARK AT 31.76 WAS SURVEYED OWH AT 30.6 WAS DEEMED INCORRECT. EXTRAPOLATED FROM SURVEYED ELEVATION DATA. ORIGINAL PLAN IS 27' X 34'.

PROJECT MANAGER: KB
DESIGNED: MSF
CHECKED: MG/KB
JOB NUMBER: 130331
SHEET NUMBER: 1 OF 5

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	05-03-13	REVIEW SET	MSF
2	06-06-13	PERMIT SET	MSF
3	11-21-13	PERMIT SET REVISION	MSF

THE CARR RESIDENCE
 SHORELINE RESTORATION PLAN
 CHRIS AND JACQUELYN CARR
 PARCEL: 1324059031
 4000 WEST LAKE SAMMAMISH PARKWAY SE
 BELLEVUE, WA 98008



LEGEND

- OHWM
- 25'-0" SHORELINE BUFFER
- 25'-0" STRUCTURE SETBACK
- PROPOSED NATURAL BOULDER WALL
- PROPOSED SHORELINE PLANTING 812 SF

EXISTING PLANTER AND TREE TO REMAIN

REPLACE STACKED CONCRETE PAVER WALL WITH NATURAL BOULDERS

RAMP MODIFIED TO MINIMIZE IMPACTS BELOW OHWM

25'-0" STRUCTURE SETBACK

25'-0" SHORELINE BUFFER

OHWM 31.76'

NAVD 88

BY OTHERS

DATE: 11/18/13
DRAWN BY: MGF/KB
PROJECT MANAGER: KB
JOB NUMBER: 130331
SHEET NUMBER: 2 OF 5

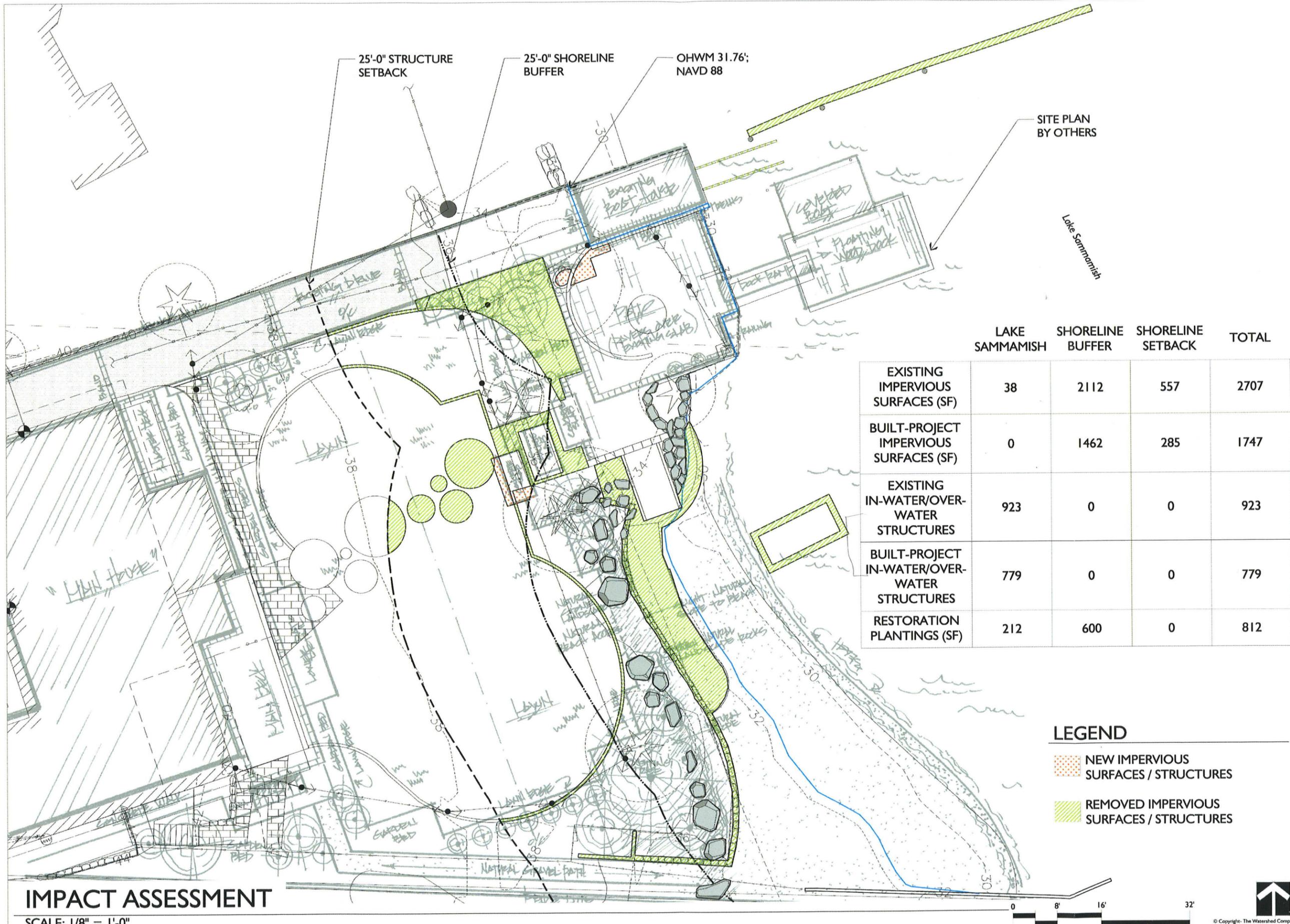
PROJECT MANAGER: KB
DESIGNED: MGF
DRAFTED: MSF
CHECKED: MGF/KB

SCALE ACCORDINGLY
ORIGINAL PLAN IS 22" x 34"

NO.	DATE	DESCRIPTION	BY
1	05-02-13	REVIEW SET	MSF
2	06-06-13	PERMIT SET	MSF
3	11-22-13	PERMIT SET REVISION	MSF

SUBMITTALS & REVISIONS

THE CARR RESIDENCE
SHORELINE RESTORATION PLAN
CHRIS AND JACQUELYN CARR
PARCEL: 1324059031
4000 WEST LAKE SAMMAMISH PARKWAY SE
BELLEVUE, WA 98008



	LAKE SAMMAMISH	SHORELINE BUFFER	SHORELINE SETBACK	TOTAL
EXISTING IMPERVIOUS SURFACES (SF)	38	2112	557	2707
BUILT-PROJECT IMPERVIOUS SURFACES (SF)	0	1462	285	1747
EXISTING IN-WATER/OVER-WATER STRUCTURES	923	0	0	923
BUILT-PROJECT IN-WATER/OVER-WATER STRUCTURES	779	0	0	779
RESTORATION PLANTINGS (SF)	212	600	0	812

LEGEND

- NEW IMPERVIOUS SURFACES / STRUCTURES
- REMOVED IMPERVIOUS SURFACES / STRUCTURES

THE CARR RESIDENCE
SHORELINE RESTORATION PLAN
CHRIS AND JACQUELYN CARR
PARCEL: 1324059031
4000 WEST LAKE SAMMAMISH PARKWAY SE
BELLEVUE, WA 98008

SUBMITTALS & REVISIONS	
NO.	DESCRIPTION
1	05-03-13 REVIEW SET
2	06-06-13 PERMIT SET
3	11-22-13 PERMIT SET REVISION

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34"
SCALE ACCORDINGLY.

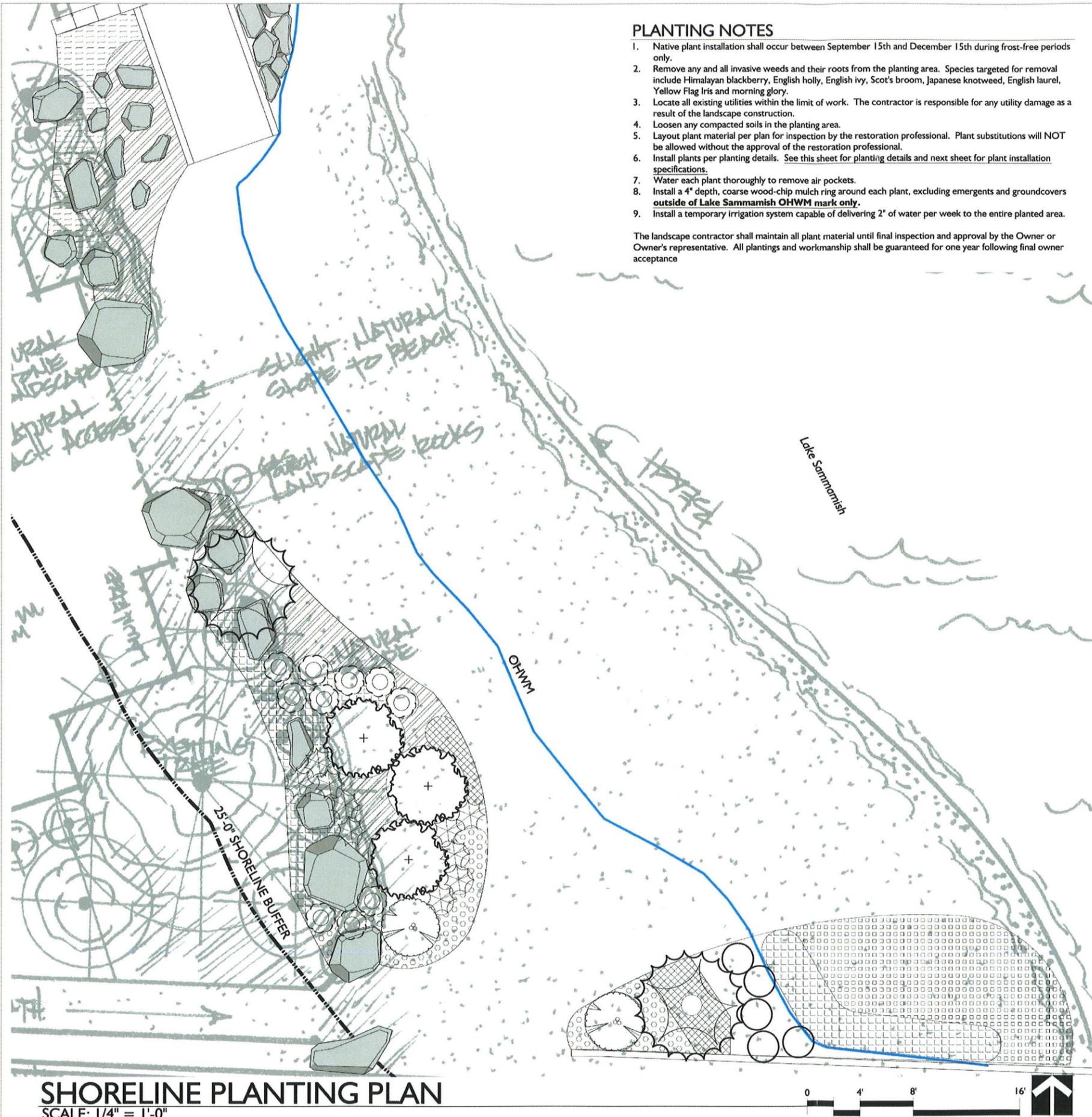
PROJECT MANAGER: KB
DESIGNED: MG
DRAFTED: MSF
CHECKED: MG/KB
JOB NUMBER:

130331
SHEET NUMBER:

3 OF 5

IMPACT ASSESSMENT

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



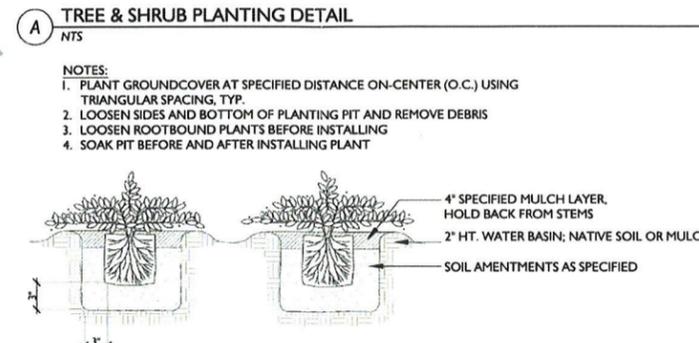
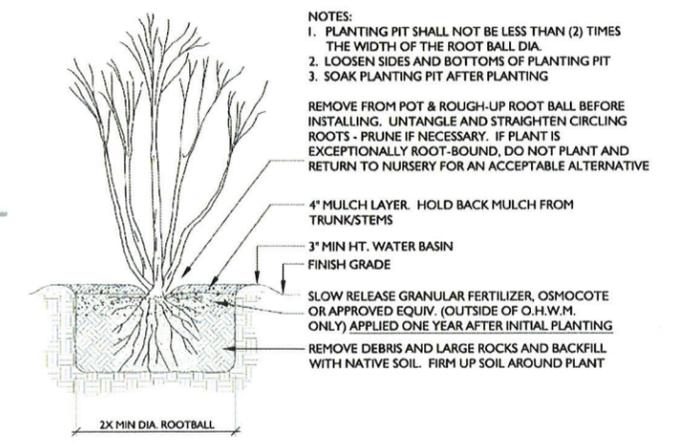
PLANTING NOTES

1. Native plant installation shall occur between September 15th and December 15th during frost-free periods only.
2. Remove any and all invasive weeds and their roots from the planting area. Species targeted for removal include Himalayan blackberry, English holly, English ivy, Scot's broom, Japanese knotweed, English laurel, Yellow Flag Iris and morning glory.
3. Locate all existing utilities within the limit of work. The contractor is responsible for any utility damage as a result of the landscape construction.
4. Loosen any compacted soils in the planting area.
5. Layout plant material per plan for inspection by the restoration professional. Plant substitutions will NOT be allowed without the approval of the restoration professional.
6. Install plants per planting details. See this sheet for planting details and next sheet for plant installation specifications.
7. Water each plant thoroughly to remove air pockets.
8. Install a 4" depth, coarse wood-chip mulch ring around each plant, excluding emergents and groundcovers outside of Lake Sammamish OHWM mark only.
9. Install a temporary irrigation system capable of delivering 2" of water per week to the entire planted area.

The landscape contractor shall maintain all plant material until final inspection and approval by the Owner or Owner's representative. All plantings and workmanship shall be guaranteed for one year following final owner acceptance

SHORELINE PLANTING LEGEND

SCIENTIFIC / COMMON NAME	QTY	SIZE
TREES - ALL TREES TO BE HEALTHY & WELL BRANCHED.		
BETULA Papyrifera PAPER BIRCH	3	2 GAL
PINUS contorta SHORE PINE	2	2 GAL
SALIX lasiandra PACIFIC WILLOW	5	1 GAL
SHRUBS - ALL SHRUBS TO BE HEALTHY, FULL & VIGOROUS.		
HOLODISCUS discolor OCEANSPRAY	2	1 GAL
ROSA pisocarpa PEA-FRUIT ROSE	10	1 GAL
SYMPHORICARPOS albus SNOWBERRY	10	1 GAL
PERENNIALS/GROUNDCOVER - ALL TO BE HEALTHY & VIGOROUS.		
CAREX obnupta SLOUGH SEDGE	125	10 CU PLUGS @ 12" OC
DESCHAMPSIA cespitosa TUFTED HAIRGRASS	42	1 GAL @ 24" OC
ERIOPHYLLUM lanatum OREGON SUNSHINE	7	1 GAL @ 24" OC
FRAGARIA chiloensis SAND STRAWBERRY	25	2-3" POTS @ 18" OC
POLYSTICHUM munitum SWORD FERN	14	1 GAL @ 24" OC
EMERGENTS - ALL TO BE HEALTHY & WELL ROOTED		
JUNCUS effusus SOFT RUSH	50	10 CU IN POTS OR PLUGS @ APPROXIMATELY 12" OC, GROUPS OF 5-7 OF SAME SPECIES IN AREAS SHOWN ON PLAN
JUNCUS ensifolius DAGGERLEAF RUSH	50	
SCHOENOPLECTUS acutus HARDSTEM BULRUSH	50	



THE CARR RESIDENCE
 SHORELINE RESTORATION PLAN
 CHRIS AND JACQUELYN CARR
 PARCEL: 1324059031
 4000 WEST LAKE SAMMAMISH PARKWAY SE
 BELLEVUE, WA 98008

NO.	DATE	DESCRIPTION	BY
1	05-03-13	REVIEW SET	MSF
2	06-06-13	PERMIT SET	MSF
3	11-22-13	PERMIT SET REVISION	MSF

SHEET SIZE:
 ORIGINAL PLAN IS 22" x 34"
 SCALE ACCORDINGLY.

PROJECT MANAGER: KB
DESIGNED: MG
DRAFTED: MSF
CHECKED: MG/KB
JOB NUMBER:
 130331
SHEET NUMBER:
 4 OF 5

PLANT INSTALLATION SPECIFICATIONS

NOTE: THESE SPECIFICATIONS ARE A LEGALLY BINDING CONTRACT

GENERAL NOTES

QUALITY ASSURANCE

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUNSCALD WILL BE REJECTED.

DEFINITIONS

- PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT / CONSULTANT.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENTS OF PLANTS

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.)

SUBMITTALS

PROPOSED PLANT SOURCES

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
- HAVE COPIES OF VENDOR'S OR GROWER'S INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION

CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
- SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY

PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONSULTANT'S DISCRETION.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL

- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES

SEE PLANT LIST ON ACCOMPANYING PLANS.

ROOT TREATMENT

- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

SHORELINE PLAN SUMMARY

Overview

The proposed restoration plan fulfills the requirements of LUC 20.25H.220(B). The plan seeks to restore and enhance portions of the Lake Sammamish shoreline buffer and setback. To achieve this, the plan calls for the enhancement of 812 square feet of the site through the planting of native trees, shrubs and groundcover within the shoreline buffer and setback. Species include paper birch, shore pine, Pacific willow, oceanspray, pea-fruit rose, snowberry, slough sedge, tufted hairgrass, Oregon sunshine, sand strawberry, soft rush, daggerleaf rush, hardstem bulrush.

Maintenance and Monitoring Plan

A 3-year maintenance and monitoring plan is proposed to ensure and document the plan meets performance standards.

Goals

- Within the proposed restoration area, establish dense native vegetation that is appropriate to the eco-region and site.
- Where indicated on the plan, areas within the restoration area will remain substantially vegetated with a preponderance of native plants and will contain little invasive or noxious weed cover.
- Increase habitat cover, refuge and food resources for amphibians, small mammals, and invertebrates. In addition to cover and food resources, provide perching habitat for native birds.

Performance Standards

The standards listed below will be used to judge the success of the installation over time. If performance standards are met at the end of Year 3, the site will then be deemed successful and the performance security bond will be eligible for release by the City of Bellevue.

- Survival: Achieve 100% survival of installed plants by the end of Year 1. This standard can be met through plant establishment or through replanting as necessary to achieve the required numbers.
- Native cover:
 - Within shrub- and tree-planted areas, achieve 40% understory cover of native shrubs and sapling trees by Year 2. Native volunteer species may count towards this cover standard.
 - Within shrub- and tree-planted areas, achieve 60% understory cover of native shrubs and sapling trees by Year 3. Native volunteer species may count towards this cover standard.
 - Within emergent-planted areas, achieve 80% understory cover of native emergent species by Year 3. Native volunteer species may count towards this cover standard.
- Species diversity: Establish at least four native woody species by Year 3. Native volunteer species may count towards this standard. Establish at least one native coniferous tree species (minimum two individuals) and at least one native deciduous tree species (minimum 4 individuals). Establish at least three native emergent species (minimum patch size of 30 square feet unless significantly intermixed)
- Invasive cover: Aerial cover for all non-native, invasive and noxious weeds will not exceed 10% at any year during the monitoring period. Invasive plants include Himalayan blackberry (*Rubus armeniacus*), cut leaf blackberry (*Rubus laciniatus*), cherry (hedge) laurel (*Prunus laurocerasus*), purple loosestrife (*Lythrum salicaria*), yellow-flag iris (*Iris pseudacorus*), reed canarygrass (*Phalaris arundinacea*), morning glory/bindweed (*Convolvulus arvensis*), English holly (*Ilex aquifolium*), and ivy species (*Hedera spp.*).

Monitoring Methods

This monitoring program is designed to track the success of the mitigation site over time and to measure the degree to which it is meeting the performance standards outlined in the preceding section.

An as-built plan will be prepared by the restoration professional (Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects) prior to the beginning of the monitoring period. The as-built plan will be a mark-up of the planting plans included in this plan set. The as-built plan will document any departures in plant placement or other components from the proposed plan.

Monitoring will take place once annually in the fall for three years. Year-1 monitoring will commence in the first fall subsequent to installation.

The formal monitoring visit shall record and report the following in an annual report submitted to the City of Bellevue:

- Visual assessment of the overall site.
- Year-1 counts of live and dead woody plants by species. Year 1 survival estimates of emergent species.
- Counts of dead plants where mortality is significant in any monitoring year.
- Estimate of native woody species cover.
- Estimate of non-native, invasive weed cover.
- Tabulation of established native species, including both planted and volunteer species.
- Photographic documentation from at least three fixed reference points.
- Any intrusions into or clearing of the planting areas, vandalism, or other actions that impair the intended functions of the mitigation area.
- Recommendations for maintenance or repair of any portion of the mitigation area.

Construction Notes and Specifications

Note: specifications for items in **bold** can be found below under "Material Specifications and Definitions."

Note: The Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects, will monitor:

- All site preparation
 - Soil preparation.
 - Mulch placement.
- Plant material inspection
 - Plant material delivery inspection.
 - 100% plant installation inspection.

General Work Sequence

- All plant installation is to take place during the dormant season (September 15th - December 15th), for best survival.
- Prepare a planting pit for each plant and install per the planting details.
- Mulch the entire planted area with **wood chip mulch** (1 cubic yard needed), four inches thick.
- Install a temporary, above ground **irrigation system** to provide full coverage to all plants within the restoration area.

Material Specifications and Definitions

- Fertilizer:** Slow release, granular PHOSPHOROUS-FREE fertilizer. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Note that fertilizer is to be applied only in Years 2 and 3 and not in the first year. Do not apply fertilizer to inundated or ponded areas or lakeshore areas

that may become inundated.

- Irrigation system:** Automated system capable of delivering at least one inch of water per week from June 1 through September 30 for the first two years following installation.
- Restoration Professional:** Watershed Company [(425) 822-5242] personnel, or other persons qualified to evaluate environmental restoration projects.
- Wood chip mulch:** Arborist chips (chipped woody material) approximately 1 to 3 inches in maximum dimension (not sawdust or coarse hog fuel). This material is commonly available in large quantities from arborists or tree-pruning companies. This material is sold as "Animal Friendly Hog Fuel" at Pacific Topsoils [(800) 884-7645]. Mulch must not contain appreciable quantities of garbage, plastic, metal, soil, and dimensional lumber or construction/demolition debris.

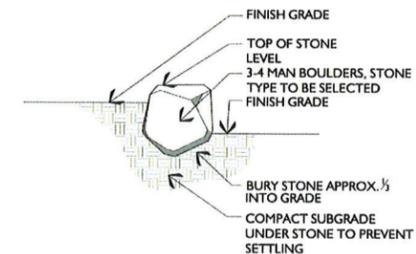
Contingencies

If there is a significant problem with the restoration areas meeting performance standards, a contingency plan will be developed and implemented. Contingency plans can include, but are not limited to: soil amendment; additional plant installation; and plant substitutions of type, size, quantity, and location.

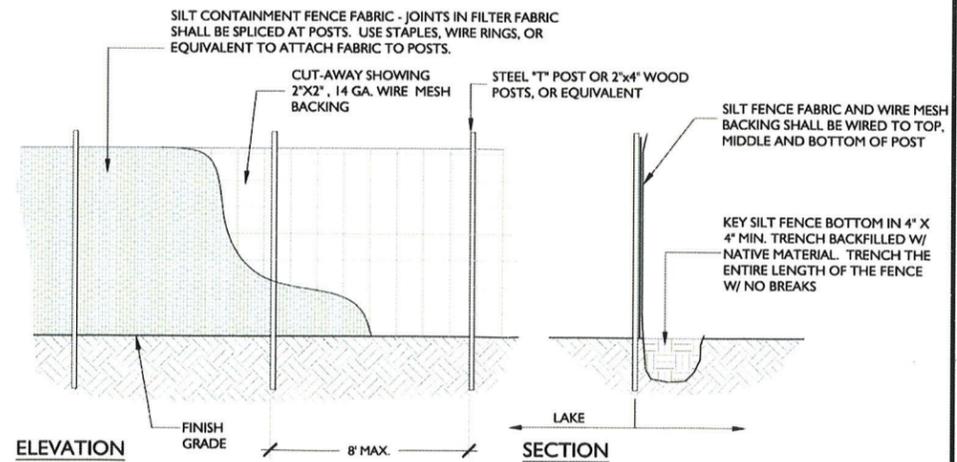
Maintenance

The site will be maintained in accordance with the following instructions for three years following completion of the construction.

- Follow the recommendations noted in the previous monitoring site visit.
- General weeding for all planted areas:
 - At least twice yearly, remove all competing weeds and weed roots from beneath each installed plant and any desirable volunteer vegetation to a distance of 18 inches from the main plant stem. Weeding should occur at least twice during the spring and summer. Frequent weeding will result in lower mortality, lower plant replacement costs, and increased likelihood that the plan meets performance standards by Year 3.
 - More frequent weeding may be necessary depending on weed conditions that develop after plant installation.
 - Do not weed the area near the plant bases with string trimmer (weed whacker/weed eater). Native plants are easily damaged or killed, and weeds easily recover after trimming.
 - Selective applications of herbicide may be needed to control invasive weeds, especially when intermixed with native species. Herbicide application, when necessary, shall be conducted only by a state-licensed applicator. Use only herbicide formulations approved for aquatic areas.
- Apply slow release granular fertilizer to each installed plant annually in the spring (by June 1) of Years 2 and 3. Do not apply fertilizer to inundated or ponded areas or lakeshore areas that may become inundated.
- Replace mulch as necessary to maintain a 4-inch-thick layer, retain soil moisture, and limit weeds.
- Replace each plant found dead in the summer monitoring visits during the upcoming fall dormant season (September 15th - December 15th).
- The homeowner will ensure that water is provided for the entire planted area above the lake level with a minimum of 1 inch of water provided per week from June 1 through September 30 for the first two years following installation through the operation of a temporary irrigation system. Less water is needed during March, April, May and October.



A BOULDER SETTING DETAIL
NTS



B SILT FENCE DETAIL
NTS

- SILT FENCE MAINTENANCE STANDARDS:
- ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
 - SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 6" IN DEPTH.



750 Sixth Street South
Kirkland WA 98033

P 425.822.5242 F 425.827.8136
www.watershedco.com

Science & Design

THE CARR RESIDENCE
SHORELINE RESTORATION PLAN
CHRIS AND JACQUELYN CARR
PARCEL: 1324059031
4000 WEST LAKE SAMMAMISH PARKWAY SE
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