



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

Proposal Name: Tse Patio

Proposal Address: 13617 SE 54th Pl.

Proposal Description: Land Use review of a patio and block walls within a 50-foot top-of-slope buffer from a steep slope critical area associated with code enforcement 11-122443-EA.

File Number: 11-130705-LO

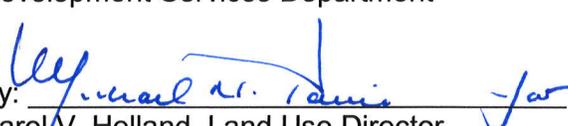
Applicant: Lap Tse, Property Owners

Decisions Included Critical Areas Land Use Permit
(Process II. 20.30P)

Planner: Reilly Pittman, Land Use Planner

**State Environmental Policy Act
Threshold Determination:** Exempt per WAC 197-11-800 and BCC 22.02.032.C

Director's Decision: **Approval with Conditions**
Michael A. Brennan, Director
Development Services Department

By: 
Carol V. Helland, Land Use Director

Application Date: December 16, 2011
Notice of Application Date: January 5, 2012
Decision Publication Date: January 26, 2012
Project Appeal Deadline: February 9, 2012

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Appeal of the Critical Areas Land Use Permit 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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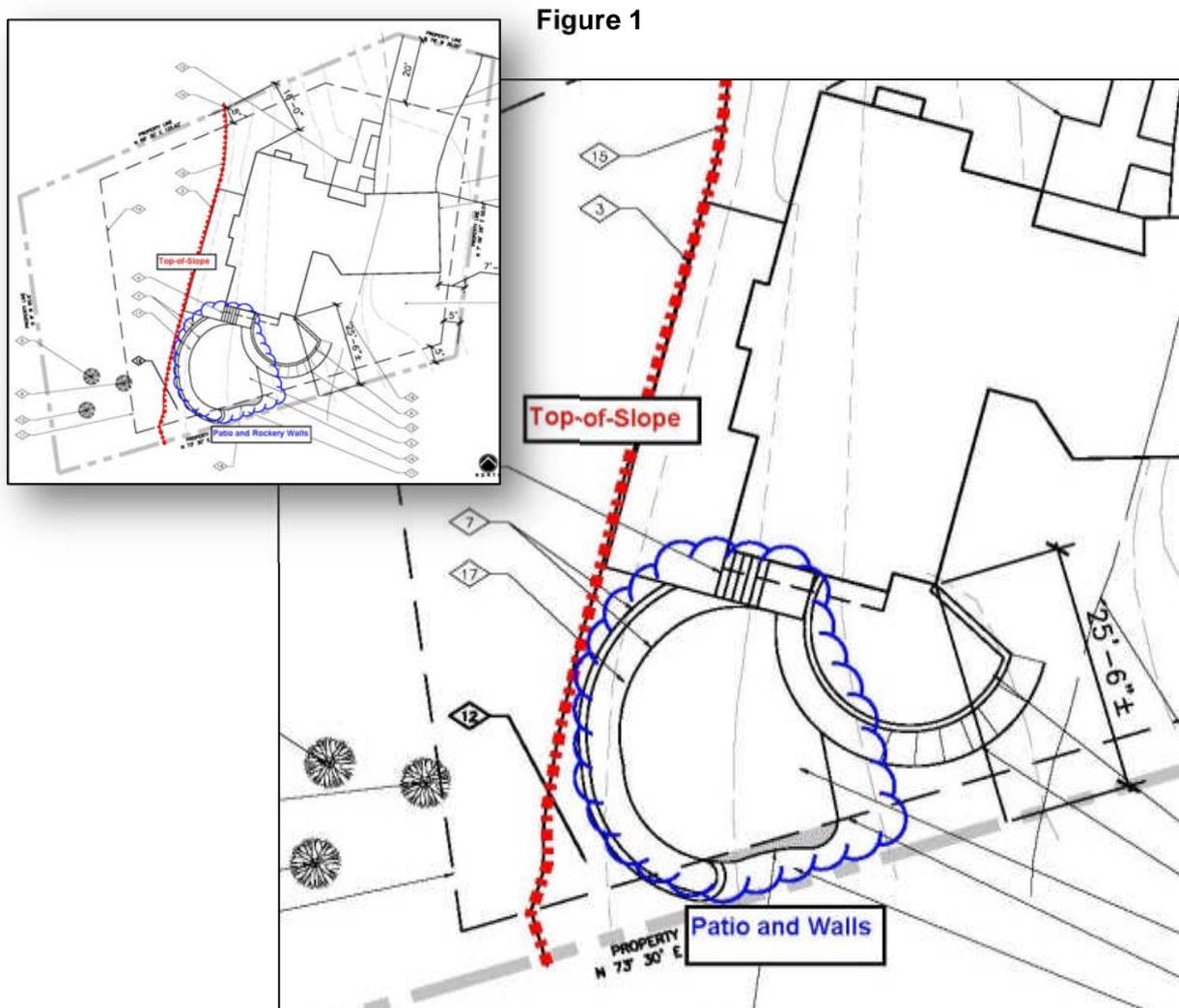
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1. Site Plan – Enclosed
2. Steep Slope Planting Template – Enclosed
3. Geotech Report prepared by Adapt Engineering Inc. – In File
4. Mitigation and Monitoring Plan and application materials – In File

I. Proposal Description

The applicant constructed a circular patio and 2 terraced block walls within the 50-foot top-of-slope buffer from a steep slope critical area. The improvements modify approximately 600 square feet of slope buffer immediately above the top-of-slope. A Critical Areas Land Use Permit is required to approve reduction of the buffer for the patio and walls. See Figure 1 below and Attachment 1 for a project site plan.



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

A. Site Description

The project site is located at 13617 SE 54th Street in the Factoria subarea of the City. Other developed and single-family zoned properties are located to the north, east, and south. The property is adjacent to NE 54th Place to the north. The steep slope critical areas on the property are located on the western half of the property and descend in elevation from the top-of-slope, continuing down into the public Westwood Highlands Open Space adjacent to the west. See Figure 2 for existing site condition.

Figure 2



B. Zoning

The property is zoned R-3.5, single-family residential which allows the constructed residential improvements.

C. Land Use Context

The property has a Comprehensive plan Land Use Designation of SF-M (Single Family Medium Density) and the improvements are consistent with a residential land use designation.

D. Critical Areas On-Site and Regulations

i. Geologic Hazard Areas

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (WAC 365-190).

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and important

linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provide a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas enhancing property values and buffering urban development.

ii. Habitat Associated With Species of Local Importance

Urbanization, the increase in human settlement density and associated intensification of land use, has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005 Munns 2006), is a major cause of native species local extinctions (Czech et al 2000), and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001a). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999, Marzluff 2005). Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The R-3.5 zoning dimensional requirements found in LUC 20.20.010 apply to the proposed block walls. A structure is only allowed within a required structure setback when the structure is 30 inches or less in height, measured from finished grade. The height of any walls within any setback shall be 30 inches or less. The wall height will be verified and reviewed under the required clearing and grading permit. If the walls are found to be over 30 inches and within a setback, the wall height shall be reduced to meet the limit. The site plans submitted with the permit must show the top and toe elevations of the walls. See Conditions of Approval in Section X of this report.

B. Critical Areas Requirements LUC 20.25H:

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes 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. The project area is within the 50-foot top-of-slope buffer from a steep slope critical area and is subject to the performance standards

found in LUC 20.25H as specified in the table below

Critical Area	Geologic Hazard- Steep Slopes
Performance Standards	20.25H.125 20.25H.145 20.25H.230

i. Consistency with LUC 20.25H.125

Development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

1. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

The patio and walls are located above the top-of-slope in a flatter area that was previously a lawn. The construction used tiered block walls to minimize alteration of the existing topography. The walls were backfilled to create a level area for the patio.

2. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

The proposed patio is located outside of any steep slope critical areas and is adjacent to the existing house. The proposed patio does not go any closer to the steep slope than other existing improvements which are located along the top-of-slope. No vegetation other than lawn was removed to construct the patio. Any significant vegetation on the site is located below the top-of-slope.

3. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

A geotechnical engineer examined the site, walls, and patio and found the risk to neighboring properties “will be minimal” and that the construction “does not adversely impact the site stability or surrounding properties” (Geotech Report, Pg. 4). The applicant will be required to record a hold harmless agreement which releases the City from liability for any damage arising from the location of improvements within a critical area buffer in accordance with LUC 20.30P.170. See Conditions of Approval in Section X of this report.

4. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;

Retaining walls were used to tier the slope and create a flat area for the patio.

The use of the walls avoided any improvements located in the steep slope and kept improvements in the buffer where the grades were more gradual.

5. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;

No construction is located in the actual steep slope critical area. The percentage of the site covered by impervious surface is 31.4 percent which is significantly less than the maximum 50 percent site coverage allowed by zoning. Including the patio and walls, the site is using 63 percent of its potential impervious surface coverage. The tiered walls also created a flat area between the walls which can be planted with vegetation. Mitigation planting in the steep slope, below the walls is also proposed as part of the project. The new vegetation will provide improved coverage by vegetation on this slope, improving erosion protection, slope stability, and storm water functions.

6. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;

No change in grade within a steep slope is proposed. The constructed walls do employ a stepped retention system.

7. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;

The patio is not an addition to the primary structure and no foundation is proposed in a steep slope. Therefore, using a foundation as a retaining device is not an option.

8. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

No construction is proposed on slopes of 40 percent or greater.

9. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

No construction is proposed in slopes of 40 percent or greater.

10. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and

restoration plan meeting the requirements of LUC 20.25H.210.

The constructed patio and walls removed 600 square feet of existing lawn. The area temporarily disturbed surrounding the walls was already restored and replanted. In addition the applicant has proposed a mitigation planting plan to install new vegetation, remove ivy, and blackberry which are located on the slope. The mitigation planting proposed will install only ground cover plants. Installing only ground covers is not adequate enough to demonstrate an improvement of the critical area that is required for approval of slope buffer modification. In addition, the mitigation provided is required at a 1:1 ratio with the impacted buffer proposed. If 600 square feet of buffer is modified, 600 square feet of mitigation is required. The planting must also include shrubs as the primary vegetation type to be installed to provide the necessary improvement of the critical area and to have success at out-competing the invasive plants. Planting an area of 600 square feet will require at least 38 shrubs and 113 ground covers spaced 4 to 6 feet on-center and 2 feet on-center respectively. More shrubs can be installed in lieu of ground covers. The plans submitted with the clearing and grading permit will require mitigation planting to achieve at least this plant quantity and density. Plant species can be referenced from the City's planting templates for steep slope critical areas which are Attachment 2 to this report. See Conditions of Approval in Section X of this report.

ii. Consistency With LUC 20.25H.145

Modification of a slope buffer requires a critical areas report as part of the application for a Critical Area Land Use Permit. As this proposal will reduce the required 50-foot top-of-slope buffer, the applicant has obtained the services of a qualified geotechnical engineering company to study the site and document the observed conditions. Staff has reviewed a Geotechnical Report by Adapt Engineering dated December, 5, 2011. This geotechnical analysis finds that the proposal does not increase risk to adjacent properties, is not altering the steep slope on-site, and that the existing site and the site post construction poses a "minimal geological hazard (Pg. 4). The geotech also reviewed the placement of the walls and patio and their location at 2-3 feet from the top-of-slope to be "sufficient from a geotechnical standpoint" (Pg. 4). Per LUC 20.30P.170, approval of projects to locate or modify buffers, setbacks, or the steep slopes critical areas require the proponent to complete a Hold Harmless Agreement with the City. The agreement is required to be completed prior to clearing and grading permit issuance on a form provided by the City. See Conditions of Approval in Section X of this report.

IV. Public Notice and Comment

Application Date:	December 16, 2011
Public Notice (500 feet):	January 5, 2012
Minimum Comment Period:	January 19, 2012

The Notice of Application for this project was published the City of Bellevue Weekly Permit Bulletin on January 5, 2012. It was mailed to property owners within 500 feet of the project site. No comments were submitted.

V. Summary of Technical Reviews

A. Clearing and Grading

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

VI. State Environmental Policy Act (SEPA)

Construction of the improvements is exempt from SEPA per WAC 197-11-800. A top-of-slope buffer is not designated as a critical area per BCC 22.02 and LUC 20.25H.025. Work within the slope buffer does not require SEPA.

VII. Changes to Proposal Due to Staff Review

Staff has required additional mitigation planting in order to demonstrate the required improvement of steep slope critical area functions. The planting is required to be shown on the plans submitted with the clearing and grading permit. Staff has also required the heights of the walls to be shown on the plans, measured from finished grade to confirm that no walls greater than 30 inches are located in a required setback. Staff has also required that the required 5-year monitoring include the submittal of an annual report with photos to document plant growth.

VIII. Decision Criteria

A. 20.25H.255.B Critical Areas Report Decision Criteria

The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

- 1. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;**

The proposed mitigation planting, with the added requirement for 38 shrubs and 113 ground covers or additional shrubs in lieu of ground covers will result in a net gain of steep slope critical area function. Improved function will result from removal of invasive species and replacement with a mid-level canopy provided by the shrubs which currently is not present. The site is adjacent to a vegetated open space corridor and the vegetation to be installed on the slope, at the edge of this corridor will help to buffer the open space habitat.

- 2. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;**

The most important critical area function this site provides is to buffer the adjacent

open space corridor. Installation of shrubs will create a mid-level canopy which is currently lacking on the site. The existing invasive vegetation will be removed and replaced with native plants that will also improve erosion control by increasing vegetation density on the slope.

3. The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;

Stormwater quality will be improved by increased capture of runoff onto the slope from the vegetation to be installed. The walls were constructed with drainage systems that will also capture and distribute water before it reaches the slope, and prevent direct flow onto the slope.

4. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;

Mitigation planting is required as conditioned. The planting will be maintained and monitored for a period of at least five years. A maintenance surety will be required and held for the 5 years. The surety will be released after five years, assuming restoration has been successful. Success of the planting will be evaluated in annual monitoring reports which evaluate the progress on meeting the performance standards described in the conditions of approval. The monitoring must include annually submitted photos reporting the condition of the plants each year. Photos will be taken each year from locations designated on the plans and in the field. The annual reports must be sent to City staff in order for the maintenance surety to be released. See Conditions of Approval in Section X of this report.

5. 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

The modifications and performance measures in this proposal are not detrimental to the functions and values of the steep slope.

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

The proposed modifications to the yard area are allowed in this zone and are compatible with adjacent land uses.

A. 20.30P.140 Critical Area Land Use Permit Decision Criteria – Decision Criteria

The Director may approve, or approve with modifications an application for a Critical Area Land Use Permit if:

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

The applicant must obtain a clearing and grading permit and any other required development permits. See Conditions of Approval in Section X of this report.

- 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.**

The 600 square-foot area of patio and walls was located in an existing area of lawn on a gradual slope. The area is within a designated slope buffer, but a qualified geotechnical engineer has reviewed the proposal and found that the improvements do not “adversely impact site stability or surrounding properties” (Pg. 4). The mitigation planting proposed will improve vegetation coverage on the slope which is currently covered with invasive species and large trees, lacking mid-level coverage.

- 3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable.**

As discussed in Section III of this report, the applicable performance standards of LUC Section 20.25H are being met.

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

The proposed activity will be served by adequate public facilities.

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

The mitigation planting is conditioned to be consistent with the City’s planting templates for steep slopes. At time of clearing and grading permit a cost estimate for the planting will be required and a planting plan which shows the plant species, quantity, and size to be installed and the 600 square-foot location where the plants are installed on the property. Part of the permit inspection process will include an inspection by Land Use staff to ensure the planting is installed. See Conditions of Approval in Section X of this report.

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

As discussed in this report, the proposal complies with all other applicable requirements of the Land Use Code and Bellevue City Code. See Conditions of Approval in Section X of this report.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, City Code and Standard compliance reviews, the Director of the Development Services Department does hereby **approve with conditions** the constructed patio and block walls located in the 50-foot top-of-slope buffer. **Approval of this Critical Areas Land Use Permit does not constitute a permit for construction. A clear and grade permit and/or other development permit is required and all plans are subject to review for compliance with applicable City of Bellevue codes and standards.**

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	Janney Gwo, 425-452-6190
Land Use Code- BCC Title 20	Reilly Pittman, 425-452-4350
Noise Control- BCC 9.18	Reilly Pittman, 425-452-2973

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 does not constitute an approval of a development permit. Application for a clearing and grading permit or other required permits must be submitted and approved. Plans submitted as part of a permit application shall be consistent with the activity permitted under this approval.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 2. Block Wall Height Verification:** The plans submitted with the clearing and grading permit must show the top and toe elevations of the wall so that the height can be determined. No wall is allowed in a structure setback which is greater than 30 inches in height measured from finished grade.

Authority: Land Use Code 20.20.025
Reviewer: Reilly Pittman, Development Services Department

- 3. Mitigation Planting Plan:** At least 600 square feet of area on the slope, below the walls is required to be planted in exchange for the reduction of the slope buffer. The planting shall include at least 38 shrubs. Additional shrubs can be installed in lieu of ground covers, but the 600 square feet must have a sufficient plant density with shrubs spaced 4 to 6 feet on-center. The planting area and plants are required to be shown on the plans submitted for the clearing and grading permit. Plants must be native and can be selected from the City's planting templates for steep slopes or as recommended by a qualified specialist.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 4. Planting Cost Estimate:** A cost estimate for the proposed plant installation and 5 years of maintenance and monitoring must be submitted prior to clearing and grading permit issuance.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 5. Maintenance Surety:** A maintenance surety, based on the cost estimate above is required which is 100 percent of the total cost for 5 years of maintenance and monitoring or the cost of the plants. The maintenance surety is required prior to clearing and grading permit issuance.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 6. Monitoring:** The planting area shall be maintained and monitored for 5 years. Annual monitoring reports are to be submitted to Land Use each of the five years.. Photos from selected photo points will be included in the monitoring reports to document the planting. The following schedule and performance standards apply and are evaluated in the report for each year:

Year 1 (from date of plant installation)

- *100% survival of all installed plants and/or replanting in following dormant season to reestablish 100%*
- *0% coverage of invasive plants in planting area*

Year 2 (from date of plant installation)

- *At least 90% survival of all installed material*
- *Less than 5% coverage of planting area by invasive species or non-native/ornamental vegetation*

Year 3, 4, & 5 (from date of plant installation)

- *At least 85% survival of all installed material*
- *At least 35%(Yr3), 50%(Yr4), 70%(Yr5) coverage of the planting area by native plants in each year respectively*
- *Less than 5% coverage by invasive species or non-native/ornamental vegetation*

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

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Reilly Pittman, Development Services Department

- 7. Photo Monitoring Locations:** The locations where photos will be taken to monitor the planting must be shown on the site plan for the clearing and grading permit. The locations shall also be marked in the field with stakes to ensure easy location recall over the monitoring period.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 8. Code Enforcement Resolution:** The replanting and successful completion of the 5 year monitoring of the replanting in the steep slope resolves code enforcement 11-122443-EA.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

- 9. Hold Harmless Agreement:** The applicant shall submit a hold harmless agreement in a form approved by the City Attorney which releases the City from liability for any damage arising from the location of improvements within a critical area buffer in accordance with LUC 20.30P.170. The hold harmless agreement is required to be recorded with King County prior to clearing and grading permit issuance. Staff will provide the applicant with the hold harmless form.

Authority: Land Use Code 20.30P.170
Reviewer: Reilly Pittman, Development Services Department

- 10. 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: Reilly Pittman, Development Services Department

- 11. 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: Reilly Pittman, Development Services Department

**Attachment 1:
Site Plan**

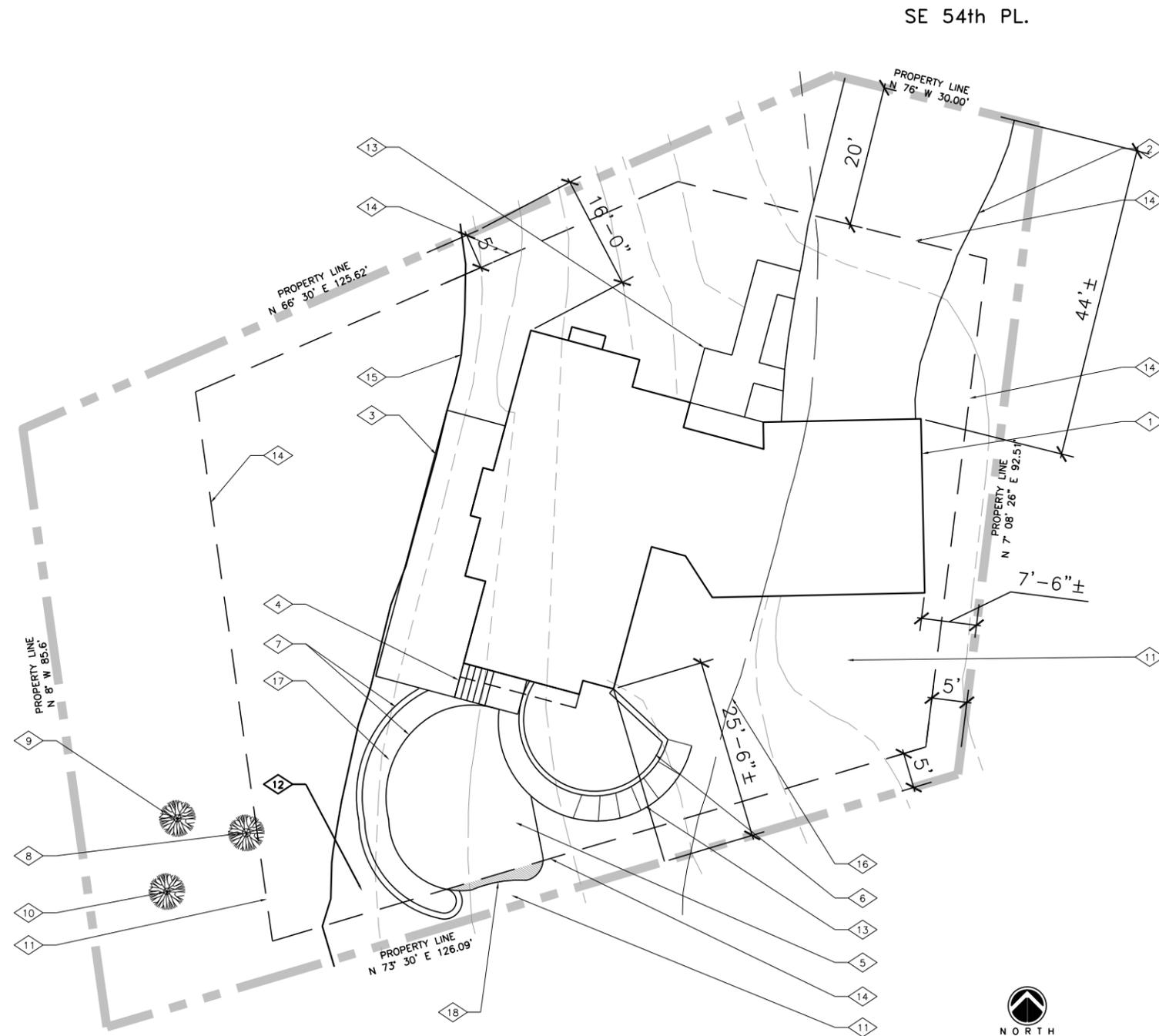
GENERAL NOTES

- MITIGATION PLAN:
- REMOVE INVASIVE BLACKBERRY AND INVASIVE IVY
 - PLANT EVERGREEN GROUND COVER
 - 16 KINNIKINICK, SALAL OR EQUIVALENT EVERGREEN GROUND COVER PER BELLEVUE PLANTING GUIDE
 - YEAR 1: REMOVE BLACKBERRY AND INVASIVE IVY, PLANT EVERGREEN GROUND COVER
 - YEARS 2-5: ENSURE SURVIVAL OF NEWLY PLANTED EVERGREEN GROUND COVER

KEYED NOTES

- 1 EXISTING RESIDENCE
- 2 EXISTING CONCRETE DRIVEWAY
- 3 EXISTING DECK
- 4 EXISTING DECK STAIR
- 5 EXISTING LOWER PATIO
- 6 EXISTING GARDEN RETAINING WALL
- 7 EXISTING MASONRY BLOCK EDGING
- 8 EXISTING 14"Ø TREE
- 9 EXISTING 12"Ø TREE
- 10 EXISTING 11"Ø TREE
- 11 EXISTING VEGETATION/GROUND COVER
- 12 **PROPOSED EVERGREEN GROUND COVER**
- 13 EXISTING WALKWAY
- 14 EXISTING SETBACK LINE
- 15 LINE OF 40% SLOPE
- 16 50' BUFFER LINE
- 17 EXISTING GRAVEL LANDSCAPE AREA
- 18 EXISTING PATIO AREA WITHIN 5' SETBACK TO BE 30" OR LESS ABOVE GRADE

IMPERVIOUS SURFACES CALCULATIONS	
	TOTAL
TOTAL BUILDING AREA	1,960 SQ.FT.
DRIVEWAY	1,101 SQ.FT.
PATIO, WALKWAYS, GARDEN WALLS, STAIRS	973 SQ.FT.
TOTAL	4,034 SQ.FT
TOTAL LOT AREA =	12,862 SQ.FT.
4,034 / 12,862 = 31.36%	
% LOT COVERAGE	31.36%



22"x34" SCALE: 1" = 10'-0"
 11"x17" SCALE: 1" = 20'-0"

OVERALL SITE PLAN | 1



PROJECT INFORMATION:

SITE PLAN
TSE RESIDENCE
 13617 SE 54th PLACE
 BELLEVUE, WA 98006
 KING COUNTY

ISSUE DATE:
 12/15/11

ISSUED FOR:
 SUBMITTAL

REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	12/15/11	ISSUED FOR SUBMITTAL	BWG

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

LICENSURE:

SHEET TITLE:
 OVERALL SITE PLAN

SHEET NUMBER: A-1 REVISION: A

A-1 | A

**Attachment 2:
Steep Slope Planting Template**

GEOLOGICAL HAZARDS TEMPLATE



Oceanspray



Thimbleberry



Mock Orange



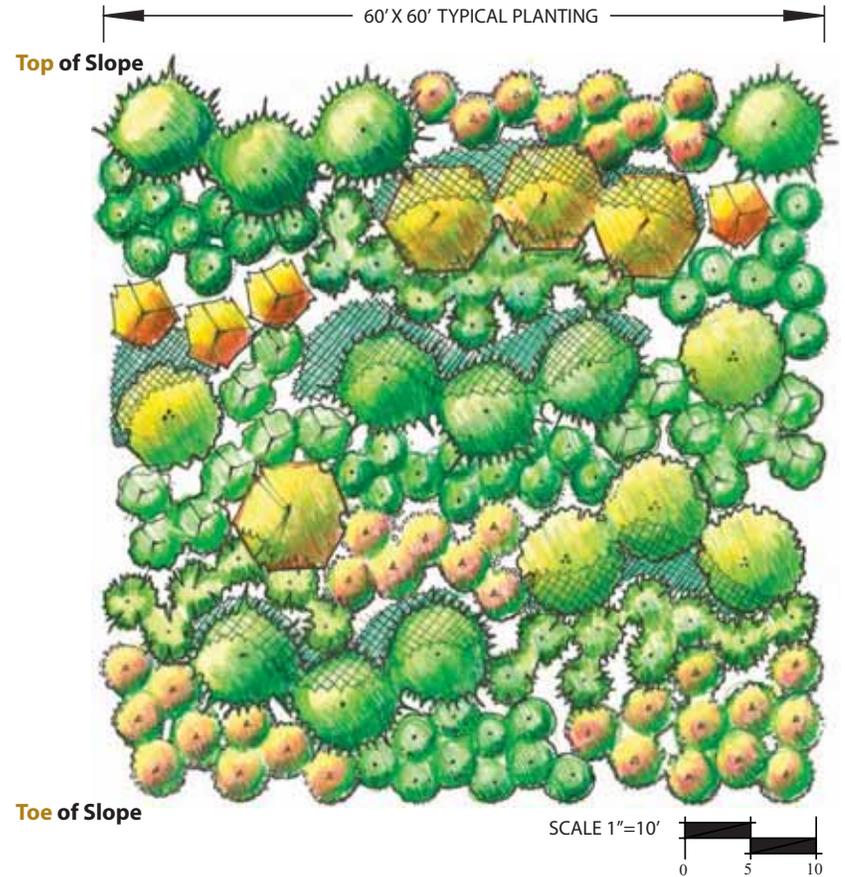
Douglas-fir

Geological Hazards

Steep Slope Planting Template for *Sunny* and *Shady* Sites

A1

GEOLOGICAL HAZARDS (STEEP SLOPE) PLANTING TEMPLATE



Steep slopes commonly have fragile, erodible soils. Planting can be difficult to establish in these areas as gravity, wind, and rain have a tendency to pull nutrient-rich soil down the slope. In addition, sunny sites require drought-tolerant plants, while both sunny and shady sites require plants with strong, root systems to keep soil intact. On the next two pages you will find one legend designed for sunny, steep sites and one designed for shady, steep sites. The plants chosen for these templates are known for drought tolerance and soil-binding characteristics. With the successful establishment of plants on steep slopes, the potential for erosion decreases. For additional information on Steep Slopes, refer to the section on *Geological Hazard Areas* in *Chapter One* and the City's [Critical Areas Ordinance](#). Note, these templates are to be used for stable and undisturbed sloping sites. If your site has experienced a landslide or substantial erosion, do not use this template; consult a professional.

PLANT LEGEND FOR SUNNY SITES

LATIN NAME/ COMMON NAME	TYPICAL SPACING/ AVERAGE HEIGHT	CHARACTERISTICS
TREES		
<i>Acer macrophyllum</i> / Big-leaf maple	9 feet on center/ 75 feet	Yellow fall color, provides understory shade, largest leaf of all maples
<i>Alnus rubra</i> / Red alder	9 feet on center/ 60 feet	Vigorous grower, provides cover quickly for other plants
<i>Pseudotsuga menziesii</i> / Douglas-fir	9 feet on center/ 100 feet	Highly adaptable, fast grower
SHRUBS		
<i>Corylus cornuta</i> / Beaked hazelnut	6 feet on center/ 11 feet	Edible acorn, wildlife food. Small understory tree, yellowish fall color
<i>Holodiscus discolor</i> / Oceanspray	4.5 feet on center/ 7 feet	Spectacular blossom; attracts hummingbirds and butterflies
<i>Philadelphus lewisii</i> / Mock orange	4.5 feet on center/ 8 feet	Fragrant white blossom
<i>Rubus parviflorus</i> / Thimbleberry	4 feet on center/ 8 feet	Delicious edible berries, fast grower, likes sun
<i>Symphoricarpos albus</i> / Snowberry	4.5 feet on center/ 5 feet	White berries, proven performer in tough conditions
GROUNDCOVERS & PERENNIALS		
<i>Arctostaphylos uva-ursi</i> / Kinnikinnick	*24 in. on center/ 6-8 in.	Evergreen groundcover, great for rockeries and full sun areas
<i>Fragaria chiloensis</i> / Coastal strawberry	*24 in. on center/ 4-6 in.	Tough, highly adaptable groundcover w/ red stems and edible berries
<i>Festuca idahoensis</i> / Idaho fescue	*24 in. on center/ 2.5 feet	Bluish leaves, clumping
<i>Polystichum munitum</i> / Sword fern	*24 in. on center/ 5 feet once mature	Semi-evergreen fern, highly adaptable
<i>Epilobium angustifolium</i> / Fireweed	*24 in. on center/ 1.5-2 feet	Big purple flowers on a tall stem

* Indicates plants are to be triangularly spaced for the area shown. See page 23 for triangular spacing.

A1-Sun

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PLANT LEGEND FOR SHADY SITES

LATIN NAME/ COMMON NAME	TYPICAL SPACING/ AVERAGE HEIGHT	CHARACTERISTICS
TREES		
<i>Acer macrophyllum</i> / Big-leaf maple	9 feet on center/ 75 feet	Yellow fall color, provides understory shade, largest leaf of all maples
<i>Alnus rubra</i> / Red alder	9 feet on center/ 60 feet	Vigorous grower, provides cover quickly for other plants
<i>Thuja plicata</i> / Western red cedar	9 feet on center/ 150 feet	Fragrant, adaptable to many sites
SHRUBS		
<i>Acer circinatum</i> / Vine maple	4.5 feet on center/ 20 feet	Bright red fall color, small understory tree, grows well in shade
<i>Amelanchier alnifolia</i> / Western serviceberry	4.5 feet on center/ 20 feet	Fragrant flowers, edible red to purple berries
<i>Corylus cornuta</i> / Beaked hazelnut	6 feet on center/ 11 feet	Edible acorn, wildlife food, small understory tree, yellowish fall color
<i>Oemleria cerasiformis</i> / Osoberry	4.5 feet on center/ 10 feet	Berries attract birds, first shrub to leaf out in spring
<i>Sambucus racemosa</i> / Red elderberry	4 feet on center/ 15 feet	Edible berries, fast grower, graceful form with age
GROUNDCOVERS & PERENNIALS		
<i>Arctostaphylos uva-ursi</i> / Kinnikinnick	*24 in. on center/ 6-8 in.	Evergreen groundcover, great for rockeries and full sun areas
<i>Asarum caudatum</i> / Wild ginger	*24 in. on center/ 6-8 in.	Tough groundcover, great for planting under shrubs and trees
<i>Polystichum munitum</i> / Sword fern	*24 in. on center/ 5 feet once mature	Semi-evergreen fern, highly adaptable

* Indicates plants are to be triangularly spaced for the area shown. See page 23 for triangular spacing.

A1-Shade

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Tse Patio
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