Application Requirements for Alteration of Geologic Hazard Areas

Part 1: Application Instructions

INSTRUCTIONS

An appointment must be scheduled to submit your application to the Development Services Center. Please call 425.556.2494 to schedule your appointment. Please see the linked E-Track Portal webpage (www.redmond.gov/e-track) for more information about user registration and electronic submittal.

APPLICABILITY

An Alteration of Geologic Hazard Areas is an exception for streets and utilities identified in an adopted plan as of October 1, 1997, such as the Comprehensive Plan, Capital Facility Plan, Transportation Improvement Plan, or Utility Facility Plan, from strict adherence to RZC 21.64, Critical Areas Regulations, as the chapter relates to Landslide Hazard Areas.

SPECIAL NOTES

The submittal requirements below may change periodically. These submittal requirements are dated January 2013.

I. ELECTRONIC PLAN REVIEW SUBMITTAL STANDARDS

Electronic plans that do not meet the requirements below will fail and will result in the application being deemed incomplete and will not be reviewed until complete.

A. File Naming Standards:

Bolded items noted in Section III, V, and associated Cover Sheets indicate the naming convention in which the particular submittal must be named. For example, the General Application (Section III) must be named General Application and Cover Sheet & Site Plan (Cover Sheet A) must be named Cover Sheet & Site Plan.

B. Plan Sheet Standards:

All plans must be drawn to scale, as specifically identified in the checklist, and each sheet shall state the scale.

C. Acceptable File Types

All application materials shall be submitted in an electronic form (i.e. Flash Drive or CD). If submitting a CD, the CD should be permanently marked with Project Name and submission date.

Plans: Plans must be submitted in a PDF format.

Documents: Calculations, reports and other supporting documents (non-drawing files) must be uploaded as a PDF.

D. Plan Orientation: All plans must be uploaded in “Landscape” format in the horizontal position.
II. PROFESSIONAL

All components of the application shall be prepared by the appropriate professional(s) licensed in the State of Washington. A license stamp or registration number, whichever is applicable, as well as the signature, shall be provided on the face of the application materials.

III. GENERAL

The applicant shall check each of the following items below to confirm that they are included in the application submittal package:

☐ A. Completed General Application Form and Project Contact Form.

☐ B. Application Fees

☐ C. Greenhouse Gas Emissions Worksheet

☐ D. If SEPA Determination is required, please see the SEPA Application checklist for submittal requirements.

☐ E. Critical Areas Report, if applicable, shall be prepared (see RZC Appendix 1: Critical Areas Reporting Requirements).

☐ F. Decision Criteria Analysis and Response must address how the proposed application will meet decision criteria (see Section IV).

☐ G. Stormwater Report prepared by a registered Civil engineer including:
   1. Map of off-site areas draining on-site.
   2. Preliminary stormwater calculations of 6 months, 2 year, 10 year, 25 year and 100 year storm peak flow rates for:
      - Pre Development (wooded or meadow site)
      - Post Development (proposal)
   3. Approximate sizing of Stormwater Quality and Quantity Control systems.

☐ H. ALTA Survey may be required by the Technical Committee in certain circumstances.

☐ I. Mitigation Plan, if required, shall be prepared in accordance with RZC Appendix 1: Critical Areas Reporting Requirements.

☐ J. Irrigation Plan, if required, showing proposed locations and size of irrigation backflow preventers, water meters, and sprinklers.

☐ K. Public Notice Site Plan showing the following information on the site plan suitable for public notice:
   - Show proposed project
   - North Arrow
   - Street numbers and/or names adjacent to the project boundary
   - Project Name
   - Identify the boundaries of any critical areas

☐ L. Public Notice Tree Preservation Plan showing the following information on the tree preservation plan suitable for public notice:
   - Show proposed project
   - Highlight, in the shade of green, trees on the site designated to remain (trees that are NOT being removed)
   - North Arrow
   - Street numbers and/or names adjacent to the project boundary
   - Project Name
   - Show an “X” over each tree proposed to be removed
   - Include a key stating that the “X” represents trees proposed to be removed.

☐ M. Geotechnical Report identifying the risk of damage from proposal, both off site and on site. The evaluation must include an analysis of whether the proposal will increase the risk of occurrence of the potential geologic hazard, and must identify measure to eliminate or reduce risk.

IV. ALTERATION OF GEOLOGIC HAZARD AREAS DECISION CRITERIA
Pursuant to the Redmond Zoning Code, Alteration of Geologic Hazard Areas applications must demonstrate the following:

A. There must be no reasonable alternative to locating in a Landslide Hazard Area. Alternative locations which would avoid impact to the Landslide Hazard Area must be shown to be economically or functionally infeasible.

B. A geotechnical evaluation must be conducted to identify the risks of damage from the proposal, both on-site and off-site, and to identify measures to eliminate or reduce risks. The proposal must not increase the risk of occurrence of the potential geologic hazard.

C. Impacts shall be minimized by limiting the magnitude of the proposed construction to the extent possible, any impacts must be eliminated or mitigated by repairing, rehabilitating, restoring, replacing, or providing substitute resources consistent with the mitigation and performance standards set forth in RZC 21.64.010.L and 21.64.010.M.

V. FORMAT

For multi-sheet applications, the engineering site plan, architectural site plan and landscape plan shall all use the same base maps unless prior arrangements have been made. Additionally, a sheet index must be provided on the face of all plan sets.

A. Provide plans labeled “Cover Sheet & Site Plan” (which includes all information on Cover Sheet A, attached).

B. Provide landscape and tree preservation plans labeled “Landscape Plan” and “Tree Preservation Plan” (which includes all information on cover Sheet B, attached).
### Part 2: Cover Sheet A (Plan Requirements)

#### INSTRUCTIONS

All plans must be submitted in a **searchable PDF format (non-scanned)**. The plans shall be drawn to an **engineering scale of 1" = 20' or larger** are required.

All components of the application shall be prepared by the appropriate professional(s) licensed in the State of Washington. A license stamp or registration number, whichever is applicable, as well as the signature, shall be provided on the face of application materials.

Please check each item below and write the applicable page # to confirm the item is included on the cover sheet & site plan.

For the subject property and surrounding properties within fifty (50) feet of the subject property unless otherwise noted, including adjacent rights-of-way, the following information shall be shown. These items shall be prepared by a registered Civil engineer in accordance with **City of Redmond Design Standards**, using 1990 City of Redmond datum for vertical and horizontal control.

### COVER SHEET & SITE PLAN

#### GENERAL INFORMATION

- ☐ a. Legal description and parcel number(s) of the subject property. Page #___
- ☐ b. Proposed UBC Construction type. Page #___
- ☐ c. Site size: gross and net (square feet and acres). Page #___
- ☐ d. Dwelling units allowed and proposed (residential). Page #___
- ☐ e. Gross floor area allowed and proposed (non-residential). Page #___
- ☐ f. Open Space/landscaping required and provided. Page #___
- ☐ g. Impervious surface allowed and proposed. Page #___
- ☐ h. Parking required, and provided. Page #___
- ☐ i. Building height allowed and proposed. Page #___

#### ON AND OFF-SITE CONDITIONS (EXISTING AND PROPOSED)

- ☐ a. Existing and proposed property lines and lots. Page #___
- ☐ b. Existing topography at 2-foot contours based upon an actual field survey. Larger contour intervals may be allowed on steep sites. Spot elevation of existing and proposed conditions may be shown for flat sites with no more than 5 feet of total elevation change.
- ☐ c. Proposed topography including heights of proposed retaining structures and rockeries
- ☐ d. Existing and/or proposed easements. Page #___
- ☐ e. Existing and/or proposed public or common use areas. Page #___
- ☐ f. Fences and other development features. Page #___
- ☐ g. Distances between existing and proposed structures on and off the subject property. Page #___
- ☐ h. Existing streams, wetlands, ponds and other surface water features and associated buffers, and flood prone areas. Page #___
- ☐ i. If the project is located within a floodplain, you must provide the Base Flood Elevation.
ONSITE TRAFFIC CIRCULATION (INCLUDING CONSIDERATION FOR THE FOLLOWING)
☐ a. Backing zones (away from heavy use areas). Page #____  
☐ b. Stacking/queuing of vehicles. Page #____  
☐ c. Drop off zones. Page #____  
☐ d. Parking areas, including stall delineation and dimensions. Page #____  
☐ e. Truck/delivery areas with dimensions and turning radii. Page #____  
☐ f. Parking layout (designed by a registered engineer for parking lots exceeding 200 spaces). Page #____

PEDESTRIAN/TRANSIT/BIKE ACCESS
☐ a. Sidewalk locations. Page #____  
☐ b. Bike rack locations. Page #____  
☐ c. Pedestrian circulation within parking lot. Page #____  
☐ d. Connections to adjacent properties. Page #____  
☐ e. Public Safety features. Page #____  
☐ f. Connection from parking to building entrances. Page #____  
☐ g. All existing and proposed driveways, intersections and land channelization within 150 of the subject property.  
☐ h. Existing and proposed roadway improvements, including sidewalk, curb and gutter, tapers and street lights within 150 feet of the subject property.

EXISTING AND PROPOSED UTILITIES
☐ a. Location and size of water facilities, including water meters and side sewers (Design Standards available at the Permit Center). Page #____  
☐ b. Location and size of sanitary sewer facilities (Design Standards available at the Permit Center). Page #____  
☐ c. Location and size of storm sewer facilities. Page #____  
☐ d. Power, power poles, gas, telephone and cable. Page #____  
☐ e. Fire hydrants. Page #____  
☐ f. Vaults. Page #____  
☐ g. boxes. Page #____  
☐ h. underground duct runs. Page #____

EXISTING AND PROPOSED FIRE INFORMATION
☐ a. Fire Department access and turnaround.  
☐ b. Fire hydrants.

EXISTING AND PROPOSED GRADING
☐ a. Profiles of existing or proposed road grades in excess of 10 percent. Page #____  
☐ b. Show existing and proposed contour lines at 2-foot intervals. Page #____  
☐ c. Designate steep slope areas (40% or steeper and 10-ft. vertical relief or more). Page #____  
☐ d. Designate areas with greater than 8 feet of cut and/or fill, adjustment from the Technical Committee required. Page #____  
☐ e. Designate retaining walls and rockeries over 8 feet, adjustment from the Technical Committee required. Page #____
Part 3: Cover Sheet B (Landscape & Tree Preservation Plans)

All plans must be submitted in a **searchable PDF format (non-scanned)**. The plans shall be drawn to an **engineering scale of 1" = 20' or larger** are required.

All components of the application shall be prepared by the appropriate professional(s) licensed in the State of Washington. A license stamp or registration number, whichever is applicable, as well as the signature, shall be provided on the face of application materials.

*Please check each item below and write the applicable page # to confirm the item is included on the site plan.*

**I. LANDSCAPE PLAN**

**SECTION COMPLETE? ☐**

**CONCEPTUAL DRAWING (INDICATING THE FOLLOWING IN ACCORDANCE WITH RZC CHAPTER 21.32, LANDSCAPING)**

- a. Existing vegetation to be retained. Page #____
- b. General location of proposed trees, shrubs and ground cover. Page #____
- c. A plant schedule providing the scientific name, common name, size and spacing of each plant as well as specie alternatives for trees, shrub masses and ground cover. Page #____
- d. Vegetation for blank screening. Alternatives to blank wall screening/relief could include:
  - i. Material Differentiation
  - ii. Texture Pattern
  - iii. Color Variation. Page #____
- e. Parking/vehicle use area screening. Page #____
- f. Proposed location and species of replacement trees required. Replacement trees shall be designated as such on the plan and be distinguished from other landscape trees. Page #____

**LOCATION, SQUARE FOOTAGE, PERCENTAGE, AND DIMENSIONS OF APPLICABLE LANDSCAPE AREAS**

- a. Interior parking lot landscaping with computation of vehicle use areas. Page #____
- b. Linkage system landscaping - Downtown zone only. Page #____
- c. Perimeter landscaping and parking lot perimeter landscaping. Page #____
- d. Foundation planting. Page #____
- e. Minimum required and proposed site landscaping (percentage). Page #____

**II. TREE PRESERVATION PLAN**

**SECTION COMPLETE? ☐**

- Preliminary Tree Preservation Plan, labeled **“Tree Preservation Plan”** showing the surveyed location and drip line of all trees four (6) inches or greater in diameter at breast height (4½' above grade) within the site and for fifty (50) feet outside of the site. Individual trees shall be identified by size and species. Page #____

  Where stands of more than twenty-five (25) trees will not be disturbed, the applicant must depict the size and species name of each significant tree, with the drip line of the stand together with a note indicating the total number of significant trees within the stand. Page #____

- Each tree shown must be designated as removed, retained (no construction within 5 feet of the drip line), or impacted (trees proposed to remain, but have construction within the drip line or 5
foot drip line setback (only retained trees may be counted toward the 35% tree retention requirement). Page #___

• The five-foot drip-line setback shall also be shown for all trees proposed to be retained and impacted. Page #___

• A tree health assessment, labeled “Tree Health Assessment” prepared by a certified arborist shall be required for all trees on site that are 6 inches or greater in diameter. The tree health assessment shall also verify that all trees designated as retained are healthy trees.

• Completion of Tree Preservation Summary Table (Attached).
Part 4: Guidelines for Demonstrating Conformance with Tree Protection Standards

Contact: For additional information regarding these guidelines, please contact the City of Redmond’s Department of Planning and Community Development at 425.556.2494 or your assigned project planner.

Description: This handout is intended to both summarize tree protection requirements and to provide a sample format for demonstrating compliance with code.

Regulations Summary: The following table summarizes the regulations related to tree preservation in the City of Redmond. For more information, please refer to RZC Chapter 21.32 Landscaping.

Measuring Trees (DBH): Single-Trunk Trees. Trees are measured according to their Diameter at Breast Height, or “DBH”. “DBH” is the diameter, measured straight across the tree trunk at 4.5’ above grade.

Multi-Trunk Trees. Where trees have more than one trunk or stem at 4.5’ and those stems come from the same “base”, the DBH for each stem at 4.5’ is measured. The DBH is then the average of the DBHs of each of the stems at 4.5’ above the ground.

Example: In the picture to the left, where the horizontal dark line is at 4.5’ high, the DBH would be the average of the diameters of A, B, & C. So, $DBH = \frac{(DBH_a + DBH_b + DBH_c)}{3}$

<table>
<thead>
<tr>
<th>Type of Tree (DBH)</th>
<th>Proposed Action and Brief Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Removal (The tree is cut down/removed from the site.)</td>
</tr>
<tr>
<td>Landmark (&gt; 30&quot;)</td>
<td>Prohibited, unless approved by an exception. A written exception request is required. Mitigation required, i.e. replacement trees at a ratio of 3:1, if exception is approved.</td>
</tr>
<tr>
<td>Significant (6&quot; - 30&quot;)</td>
<td>Regardless of the percentage of removed trees, mitigation, i.e. replacement trees at a ratio of 1:1, are required for each removed tree.</td>
</tr>
<tr>
<td>Notes</td>
<td>No more than 65% of healthy Landmark + Significant Trees may be removed, unless approved by an exception. If approved, then mitigation is required, i.e. replacement trees, at a ratio of 3:1 if exception is approved. Tree Replacement Performance Bond required for each replacement tree. 3 year maintenance bond required after performance.</td>
</tr>
</tbody>
</table>

Arborist Report: An Arborist Report shall document (1) the trees on site and (2) any off site trees that will be impacted by clearing or other improvements within 5 feet of its drip line. At a minimum, the arborist’s report shall:
Describe the site in narrative and provide an aerial or site plan documenting the locations of tree stands.

Describe the methodology, which must be considered the best of available science, that was used to rate each and every tree. Describe how trees were tagged in the field.

Document through a table the following for each tree of 6” or greater in dbh: Tree Number, Species, DBH, Health, Comment on Health, and Proposed Action. The Tree Number is that number that is affixed to the tree in the field and is used to identify it on a surveyed map.

Provide a surveyed map locating each tree, numbering each tree with its identification number, illustrating each tree’s dripline, and illustrating 5’ from each tree’s dripline. Symbols shall be used and described in a legend to distinguish the following groups: Unhealthy Trees to be Removed, Significant Trees to be Removed, Landmark Trees to be Removed, Significant Trees to be Impacted, Landmark Trees to be Impacted, Significant Trees to be Retained, and Landmark Trees to be Retained.

Recommend actions for impacted trees and general management, as appropriate.

Provide a map illustrating the locations of replacement trees.

Provide an exception request for any proposed action that would not comply with the tree protection standards, such as: removing a healthy landmark tree or having a retained tree count below the required 35%.

**Summarizing Compliance with Code:** The following table provides you with the format that is required for summarizing a proposal’s conformance with the City’s tree protection regulations. The table must appear in the Arborist Report and on the Tree Preservation Plan, both of which are part of the application. Please include the total number of trees that are 6” or greater and the number of unhealthy trees in the report.

<table>
<thead>
<tr>
<th>Proposed Action and Brief Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tree Type</strong></td>
</tr>
<tr>
<td><strong>Landmark (&gt;30&quot; dbh)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Significant (6” - 30”)</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Replacement Trees</strong></td>
</tr>
</tbody>
</table>