

# SECTION 5.0200 HILLSIDE PHYSICAL CONSTRAINT OVERLAY DISTRICT

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## General

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### 5.0201 Purpose

The purpose of the Hillside Physical Constraint Overlay District (HPCD) is to ensure that development in or adjacent to hillside areas occurs in such a manner as to:

- A. Minimize the potential for earth movement and resultant hazards to life and property;
- B. Minimize soil erosion and siltation;
- C. Protect water quality;
- D. Minimize vegetation removal in sloped areas;
- E. Protect the aesthetic and scenic qualities of hillside areas;
- F. Assure the compatibility of a new development with surrounding areas;
- G. Encourage site and building design which is consistent with the natural topography; and
- H. Minimize the cost of public infrastructure provision; and provide for adequate access for emergency services.

## 5.0202 Definition and Applicability

- A.** Hillside Physical Constraint Overlay District Definition - The Hillside Physical Constraint Overlay District (HPCD) are those areas of the City that are shown on the Community Development Hillside Special Purpose District Map and:
1. Where the slope of the land (before development) is 15% or greater; or
  2. Are within a “Higher Landslide Risk Area”;
  3. Are within a “Transition Area” (see **5.0202(C)** below); or
  4. Are within a “Further Review Area”.
- For the purposes of this section, areas of slope that are subject to the provisions of the HPCD, are contiguous areas that exhibit slopes of 15% or greater (before development) and that are at least 10,000 square feet in size. Areas of slope are considered to be contiguous if they are located within 50 feet of each other.
- B.** Applicability
1. The Soils and Geology Report (**Section 5.0210(C)**) is required for any development in the HPCD as defined in **subsection (A)** above.
  2. The provisions of the HPCD (**Sections 5.0201 – 5.0227**) apply to all development permit applications, with the following exceptions:
    - a. A LDR-5, LDR-7, TLDR or TR dwelling lot. Only **Section 5.0227** applies to an LDR-5, LDR-7, TLDR or TR dwelling building permit when it is on a lot located within a “Further Review Area”.
    - b. Only **Section 5.0221(A)** applies where development, including future development such as a “left-over” parcel, does not include any area of the parcel with slopes of 15% or greater, or the Transition Area (as defined in **Subsection (C)** below).
  3. Where there is a conflict between the standards of the underlying district or the Planned Development standards, and the standards of this HPCD, the standards of the HPCD shall apply. Where there is a conflict between the standards of the HPCD and the Habitat Conservation Area Overlay District, the standards of the Habitat Conservation Area Overlay District shall apply.
- C.** Transition Areas
1. The purpose of Transition Areas is to identify situations in which development near a steeply sloped area could affect slope stability.
  2. Transition Areas include those parcels or portions of parcels that:
    - a. Are within 100 feet of a contiguous area that exhibits slopes of 15% or greater and that is at least 10,000 square feet in size; and
    - b. Are shown on the Community Development Hillside Special Purpose District Map.
  3. A Soils and Geology Report as described in **Section 5.0210(C)** shall be required for development on parcels within the Transition Area.
- D.** Buildable Area – a portion of an existing or proposed lot that is free of building restrictions. For the purposes of this section, a buildable area cannot contain any setback areas, easements, and similar building restrictions, and cannot contain any land that is identified as Floodplain, Habitat Conservation Area, or any land that has slope greater than 35% (before development), except as provided in **Section 5.0222(F)**.
- E.** Further Review Area – an area of land within which further site specific review should occur before land management or building activities begin because either the State Department of Geology and Mineral Industries or the State Forestry Department determines that the area reasonably could be expected to include sites that experience rapidly moving landslides as a result

of excessive rainfall (ORS 195.250).

- F. Certified Engineering Geologist – any State of Oregon Registered Geologist who is certified in the specialty of Engineering Geology under provisions of ORS 672.505 to 672.705.
- G. Geotechnical Engineer – a Professional Engineer, registered in the State of Oregon provided by ORS 672.002 to 672.325, who by training, education and experience is qualified in the practice of geotechnical or soils engineering practices.
- H. Landslide – any detached mass of soil, rock or debris that is of sufficient size to cause damage and that moves down a slope or a stream channel.
- I. Rapidly Moving Landslide – a landslide that is difficult for people to outrun or escape.
- J. Higher Landslide Risk Area – an area of land within which further site-specific review should occur before land management activities begin. These are areas originally identified by the State Department of Geology and Mineral Industries and the State Forestry Department as “Further Review Areas” (9/27/02).

## Submittal Requirements

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### 5.0210 Submittal Requirements

- A. Slope Analysis Map.
- B. Hillside Slope Analysis Map. Applications for development subject to the HPCD shall include supplemental information in addition to that required for a Land Division or Design Review. The following submittals are required:

Slope Analysis Map described in **Section 5.0210(A)** above, shall include additional information for the purpose of determining maximum allowed density as well as the location of the proposed development in relation to steeply sloped areas. In addition to the information required for Slope Analysis Map for Land Divisions or Design Review (**Section 5.0210(A)**), the Hillside Slope Analysis Map for sites in the HPCD shall contain the following information:

1. Measurement of Area in Each Slope Category:
  - Slope categories shall be delineated as described in **Section 5.0210(A)**. The boundary of each polygon delineating a slope area shall run perpendicular to slope along the 10-foot contour lines and parallel to slope between contour lines. The applicant shall determine the area of the parcel which lies within each of the slope categories listed under **Section 5.0210(A)**.

The area within each slope category may be measured manually using a planimeter or calculated using a computer application. The land area of each polygon containing slopes of each of the above slope categories shall be expressed in square feet and labeled on the Slope Analysis Map. The Slope Analysis Map or application narrative shall include a table showing:

- the summed area of each slope category within the parcel, excluding rights-of-way;
  - the summed area of each slope category within the proposed rights-of-way;
  - the summed area over 35% slope (before development) within buildable areas; and
  - the total area of the parcel.
2. The location of slopes of 35% or greater in relation to proposed rights of way, utilities, and buildable areas. This information may be provided on the Hillside Slope Analysis Map if clearly readable, or on a separate map of the same scale as the Hillside Slope Analysis Map.

3. The Transition Area as defined in **Section 5.0202(C)** above.
- C. A Soils and Geology Report prepared by a Certified Engineering Geologist or a Geotechnical Engineer. The purpose of the Soils and Geology Report is to evaluate the existing geologic condition of the subject parcel, particularly with respect to slope stability; evaluate the potential risks with respect to potential geologic hazards associated with development of the parcel; and provide guidelines to minimize the potential for earth movements and erosion, and to minimize impacts to the natural condition of the site. A Soils and Geology Report is required for sites in the HPCD as well as the Transition Area.

The Manager shall select and consult with a Geotechnical Engineer or Certified Engineering Geologist to evaluate the methodology, conclusions, and recommendations of the Soils and Geology Report regarding site conditions and potential geologic hazards. A Geotechnical Engineer shall be specifically consulted when there is a Geotechnical Report submitted. The consultant for the City shall conduct a site visit prior to submitting an evaluation to the City. The written evaluation and recommendation of the Soils and Geology Report from the City's consultant shall include an evaluation regarding the following:

- the completeness of the required elements of the Soils and Geology Report;
- the acceptability of the observations, procedure, and assumptions made; and
- the support of the conclusions and recommendations by evidence provided.

The written evaluation and recommendation of the Soils and Geology Report from the City's Consultant shall be received prior to a recommendation for a Type III process, or before a decision for a Type II process. Costs for such consultation shall be paid by the applicant, in accordance with the City of Gresham's Development Fee Resolution.

The Soils and Geology Report shall be of sufficient detail to describe the geologic conditions of the parcel and immediate vicinity and evaluate the potential geologic hazards associated with the parcel. At a minimum, the Soils and Geology Report shall be formatted to generally follow the outline below, and shall include the following:

1. An Executive Summary in a format outlined and adopted by the Manager.
2. General Information.
  - a. Client or party that commissioned the report.
  - b. Name(s) of Certified Engineering Geologist(s) or Geotechnical Engineer(s) who did the mapping and other investigation on which the report is based, and dates when the work was done.
  - c. Location and size of areas, and the general setting with respect to major or regional geographic and geologic features.

- d. Purpose and scope of the report and geologic investigation, including the proposed use of the site. Also, identify level of the study, i.e., feasibility, preliminary, final, etc.
  - e. Topography and drainage within or affecting the area.
  - f. General nature, distribution, and abundance of exposures of earth materials within the area.
  - g. Nature and source of available subsurface information and geologic reports or maps. Suitable explanations of the available data shall be provided to allow a technical reviewer the means of evaluating the reliability. Reference to cited works or field observations shall be made, to substantiate opinions and conclusions.
  - h. Disclosure of known or suspected geologic hazards affecting the area, including a statement regarding past performance of existing facilities (such as buildings or utilities) in the immediate vicinity.
  - i. Locations of test holes and excavations (drill holes, test pits, and trenches) shown on maps and sections and described in the text of the report. The actual data, or processed data upon which interpretations are based, shall be included in the report to permit technical reviewers to make their own assessments regarding reliability and interpretation.
  - j. All field and laboratory testing procedures (by ASTM designation, if appropriate) and test results.
  - k. Disclosure statement of geologist's or engineer's financial interest, if any, in the project or the client's organization.
  - l. The signature and seal of the Certified Engineering Geologist (Geologist) or Geotechnical Engineer (Engineer) who prepared the report.
3. Soils and Geology Mapping and Investigation. Geologic mapping and investigation of the parcel shall be completed in sufficient detail to describe the geology of the parcel, and evaluate and describe existing or potential geologic hazards associated with the parcel. The scope of the investigation and level of detail will depend in part of the size of parcel, slope, existing geologic conditions and hazards, and the proposed improvements. The description shall address:
- a. Soil and rock types;
  - b. Stratigraphy;
  - c. Soil and rock properties;
  - d. Geologic structure;
  - e. Surficial expressions of potential geologic hazards;
  - f. Groundwater conditions;
  - g. Relevant surface and topographic features;
  - h. Any geologic or topographic changes to the site between available published geologic maps (if used) from field observations;
  - i. Seismic setting and seismic hazards; and

- j.** The three-dimensional distribution of earth material exposed and inferred within the area. A clear distinction shall be made between observed and inferred features and relationships.

One or more appropriately positioned and scaled cross-section maps showing subsurface relationships may be used for descriptive purposes.

- 4.** Soils and Geology Description. The report shall contain brief but complete descriptions of all natural materials and structural features recognized or inferred within the subject area. Where interpretations are added to the recording of direct observations, the basis for such interpretations shall be clearly stated. If any of the report items on the following checklist do not apply to the development, provide brief, but complete explanation. Describe all field mapping and exploration procedures (surface geologic reconnaissance, drilling, trenching, geophysical survey, etc.). The following checklist, at a minimum, shall be used:

- a.** Bedrock
  - i.** Identification of rock types.
  - ii.** Relative and absolute age and, where possible, correlation with named formations and other stratigraphic units.
  - iii.** Surface and subsurface expression, area distribution, and thickness.
  - iv.** Pertinent physical characteristics (e.g., color, grain size, nature of stratification, strength, variability).
  - v.** Distribution and extent of zones of weathering; significant differences between fresh and weathered rock.
  - vi.** Special engineering geologic characteristics or concerns (e.g., factors affecting proposed grading, construction, and land use).
- b.** Structural features – stratification, faults, discontinuities, foliation, schistosity, folds
  - i.** Occurrence, distribution, dimensions, orientation, and variability, both within and projecting into the area.
  - ii.** Relative ages, where pertinent.
  - iii.** Special features of faults (e.g., topographic expression, zones of gouge and breccia, nature of offsets, age of movements, youngest faulted unit and oldest unfaulted unit).
  - iv.** Other significant structural characteristics or concerns.
- c.** Surficial deposits – alluvial, colluvial, eolian, glacial, lacustrine, marine, residual, mass movement, volcanic (such as cinders and ash), and fill
  - i.** Identification of material, grain size, relative age, degree of activity of originating process.
  - ii.** Distribution, dimensional characteristics, variations in thickness, degree of soil development, surface expression.
  - iii.** Pertinent physical or chemical features (e.g., color, grain size, lithology, compactness, cementation, strength, thickness, variability).
  - iv.** Special physical or chemical features (e.g., indications of volume changes or

- instability, such as expansive clays or peat).
  - v. Other significant engineering geologic characteristics or concerns.
  - d. Surface and shallow subsurface hydrologic conditions, including groundwater, springs, and streams and their possible effect on the site, as well as impacts of soil movement on receiving streams. Indicate how conditions may be affected by variations in precipitation, temperature, etc.
    - i. Distribution, occurrence, and variations (e.g., drainage courses, ponds, swamps, springs, seeps, aquifers).
    - ii. Identification and characterization of aquifers, depth to groundwater and seasonal fluctuations, flow direction, temperature, etc.
    - iii. Relationships to topographic and geologic features.
    - iv. Evidence for earlier occurrence of water at localities now dry (e.g., vegetation, mineral deposits, historical records).
    - v. Other significant engineering geologic characteristics or concerns, such as fluctuating water table and the effects of proposed modifications on future hydrologic processes.
  - e. Seismic considerations
    - i. Description of the seismotectonic setting of the area (including size, frequency, and location of historic earthquakes), current seismic zoning, and expected seismic risk.
    - ii. Potential for area to be affected by surface rupture (including sense and amount of displacement, and width of surface deformation zone).
    - iii. Probable response of site to likely earthquakes (estimated ground motion).
    - iv. Potential for area to be affected by earthquake-induced landslides or liquefaction.
    - v. Potential for area to be affected by regional tectonic deformation (subsidence or uplift).
5. Assessment. Assessment of existing soils and geologic conditions with respect to the intended use of the site constitutes the principal contribution of the report. It involves (1) the effects of the soils and geologic features upon the proposed grading, construction, and land use; and (2) the effects of the proposed modifications upon future geologic conditions and processes in the area. The following checklist includes, at a minimum, the topics that shall be considered in discussions, conclusions, and recommendations in the Soils and Geology Report:
- a. General suitability of proposed land use to the soils and geologic conditions.
    - i. Areas to be avoided, if any, and mitigation alternatives.
    - ii. Topography and slope.
    - iii. Stability of geologic units.
    - iv. Flood inundation, erosion, and deposition.

- v. Problems caused by geologic features or conditions in adjacent properties.
  - vi. Other general problems.
- b.** Identification and extent of known or probable geologic conditions that may result in risk to the proposed land use (such as flood inundation, shallow groundwater, surface and groundwater pollution, landslide, debris flow, rock fall, expansive soil, collapsible soil, subsidence, erosion, deposition, earthquake shaking, fault rupture, tectonic deformation, liquefaction).
- c.** Recommendations for site grading.
- i. Prediction of what materials and structural features will be encountered in proposed cuts.
  - ii. Prediction of stability based on geologic factors; recommended avoidance or mitigation alternatives to cope with existing or potential landslide masses.
  - iii. Excavation considerations (hard or massive rock, groundwater flows).
  - iv. General considerations of proposed fill masses in canyons or on sidehills.
  - v. Suitability of on-site material for use as compacted fill.
  - vi. Recommendations for positioning fill masses, provision for subdrainage, buttressing, and the need for erosion protection on fill slopes.
  - vii. Recommendations for vegetation removal and revegetation for erosion control and slope stabilization.
  - viii. Recommendation as to how the site can be developed in a manner that minimizes site disturbance. Measures to be taken to stabilize slopes, minimize soil erosion, and revegetate areas where the natural vegetative cover will be removed shall be included. Such measures shall be, at a minimum, consistent with the guidance and requirements presented in the City's Erosion Prevention and Sediment Control Manual, and current erosion control and slope stability engineering practices. It may be necessary to describe and evaluate alternative site development scenarios in order to explain how the proposed development represents minimal impacts.
  - ix. Other recommendations required by the proposed land use, such as the angle of cut slopes, position of drainage terraces, need for rock-fall and/or erosion protection on cut slopes.
- d.** Drainage considerations.
- i. Soil permeability.
  - ii. Protection from sheet flood or gully erosion, and debris flows or mud flows.
  - iii. This section shall include findings and recommendations for the developed hydrologic conditions, as proposed, including treatment and detention facilities, complying with the City's Stormwater Management Manual. If infiltration facilities are proposed, the findings and recommendations shall include the effect of the facilities on slope stability.
- e.** Limitations of study, and recommendations for additional investigations. Considering the scope of work and intended use of the site, provide a statement of the limitations of the study and the need for additional studies outside the stated



- E. Summary Narrative. A summary narrative of applicant responses to the requirements of the HPCD Development Standards (**Sections 5.0221 – 5.0227**).

## **Development Standards**

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### **5.0220 Development Standards**

#### **5.0221 Lot Development Standards**

- A. For parcels in the HPCD, the minimum and maximum number of permitted units shall be as follows:
  - 1. The maximum number of permitted units: that permitted by the underlying district for the portions of the site that have slopes less than 15%.
  - 2. The minimum number of required units: that required by the underlying district for the portions of the site that have slopes less than 15%.
  - 3. No density credit is permitted for portions of the site that have slopes 15% or greater, or for portion of the site within a Habitat Conservation Area Overlay District, except as provided in subparagraph (4) below.
  - 4. The maximum number of permitted units for the site can be increased through a Planned Development, as provided by **Section 6.0300**.
- B. The site development requirements of the underlying land use district, except as provided in **Subsections 5.0221(A)** and **5.0202(B)** above, shall apply.
- C. Each residential lot shall have a minimum, contiguous “buildable area”, as defined in **Section 5.0202(D)**, of 50% of the lot or 2,000 square feet, whichever is less.
- D. Lots in the LDR-5, LDR-7, TLDR or TR Districts that are entirely within the HPCD are exempt from the Safe Neighborhood Design Performance Standards of **Section 4.0132(D)**.
- E. A Geotechnical Report and structural engineering design is required for any building permit submittal on individual lots in the LDR-5, LDR-7, TLDR and TR Districts, which had native slopes (prior to development) of 35% of greater.

#### **5.0222 Development on Slopes Greater than 35%**

Limited development on slopes of greater than 35% (before development) may be permitted, as supported by **Section 5.0210(C)(5)**, for the following purposes:

- A. Public Facilities and Utilities.
  - 1. Public facilities (including streets) and utilities may be allowed on slopes greater than 35% (before development), if designed such that these improvements avoid slopes exceeding 35% (before development) to the maximum extent possible. Public streets or accessways may be developed on slopes over 35% (before development) if the street location is necessary to provide street connectivity or for emergency vehicle access. Construction of public streets shall comply with maximum grades as specified in the Gresham Public Works Standards.
  - 2. Public facilities (including streets) and utilities may be constructed as described above if the following specific determination is made in the Soils and Geology Report:
    - a. That these facilities can be constructed given the geologic condition of the area of development; and
    - b. That these facilities can be constructed in a manner to minimize the potential for

earth movement and erosion.

**B. Open Space Development.**

Open spaces and conservation easements may be improved with private walking/hiking trails, or with public trails or paths, subject to the determinations in the Soils and Geology Report described in **5.0222(A)(2)**. Public trails or paths shall be limited to public open spaces, and private trails or paths shall be limited to private open spaces and conservation easements.

**C. Preservation of Slopes Greater than 35%.**

All areas exhibiting slopes of 35% or greater (before development), not developed under **Subsection 5.0222(A), (D) and (F)**, shall be preserved by easement (public or private). If preservation is proposed to be private, it can be either by tract or as a part of an individual lot (with the easement overlay). Public preservation shall be by tract only. Easement types shall be conservation, open space, or public access easements, in accordance with **Section 9.0300**. The type of easement appropriate for preservation of the excessively steep slopes shall be at the discretion of the Manager. Acceptance of proposed dedication of open space shall be at the City's discretion. Any proposal to dedicate open space shall be in accordance with **Section 5.0500**.

**D. Lots of Record**

1. Legal lots of record may be improved with a maximum of one dwelling unit on slopes over 35% (before development) with a finding that there is not a sufficient, and accessible, land area on less than 35% slope (before development) for the proposed dwelling.
2. Legal lots of record with less than 10,000 square feet of land exhibiting slopes less than 15%, may be improved with a maximum of one dwelling unit without processing a Planned Development, in accordance with **Section 6.0300**.

**E. Lot Building Area**

1. All lots shall have a "buildable area" as defined in **Section 5.0202(D)**. No building area shall include slopes greater than 35% (before development), except as provided in **Section 5.0222(F)**.
2. The impacts of any driveway crossing slopes of 35% or greater (before development) are addressed in the geotechnical portion of the Soils and Geology Report (**Section 5.0210(C)(5)**).

**F. Lot Building Area (Restricted to PDs)**

1. A lot building area may include slopes (before development) greater than 35% up to 60% only when the PD is 10 acres or more in size.
2. No more than 30 percent of the net land area where slopes (before development) are greater than 35% up to 60% slopes within the PD may be included within lot building areas.
3. No lot building area shall include land which exceeds 60% slope (before development).
4. The findings of the applicable sections of the Specific Reports of **Section 5.0210**, as well as the analysis of these reports, indicate that: these sloped areas of 35%-60% (before development) are not susceptible to earth movement or landslide hazard; and the proposed construction and design techniques will minimize cuts, fills and potential adverse impacts to existing vegetation and have no adverse impacts to existing drainage ways, water quality and slope stability.

### **5.0223 Minimizing Site Disturbance**

The applicant shall show all site grading, clearing and other site disturbance including that proposed for

rights-of-way, utilities, buildable areas and driveways, as described in **Section 5.0210(D)**, Preliminary Grading Plan.

- A. No more than 35% of the total site of the area exhibiting slopes of 15% or greater (before development), shall be graded, cleared or otherwise disturbed. Except that one additional percentage of land may be disturbed for each percentage of land dedicated to open space above the minimum required in Section 6.0324 (i.e. – 40% [35%+5%] of the total site over 15% slope may be disturbed if a minimum of 30% [25%+5%] open space is dedicated). For individual single-family dwelling building permits, see **Section 5.0202(B)(2)(a)**.

In order to meet this requirement, applicants are encouraged to pursue innovative site design techniques such as:

- Limiting grading on building lots only to that area needed for driveways and building pads;
- Limiting the total area of the site dedicated to roadways while maintaining adequate connectivity and providing for adequate emergency access consistent with the roadway standards;
- Locating roads on less steeply sloped areas to minimize the width of graded areas needed for roads;
- Designing and locating structures so that they fit into the contour of the hillside rather than altering the hillside to fit the structure;
- Using retaining structures as an alternative to banks of cuts and fills;
- Building designs, which require less grading, such as split-level and stair-stepping foundations and the use of piers;
- Placing structures as close as possible to the street so as to minimize driveway construction in the sloped areas; and
- Focusing development on slopes less than 15%.

**B. Hillside Grading and Drainage Control**

All development on lands within the HPCD shall provide construction plans that conform to the following items:

1. All grading, retaining wall design, drainage, and erosion control for development on HPCD lands shall be designed by a Registered Civil Engineer in accordance with the recommendations and guidelines provided in the Soils and Geology Report, as approved by the Manager. All cuts, grading or fills shall conform to Building Code. Erosion control measures shall conform to **Section 9.0514**.
2. For developments other than single-family detached dwellings, all grading, drainage improvements, or other land disturbances on slopes of 15% or greater, shall only occur from May 31 to October 1. Wet-weather erosion control measures shall be installed and functional by October 1. The time period for land disturbance activities may be extended (either earlier than May 31 or later than October 1) by the City’s Engineer after approval by the Stormwater Manager or designee, based on the recommendations of the Soils and Geology Report, with the concurrence from the City’s consulting engineer. The modification of dates shall be the minimum necessary, based upon evidence provided by the applicant, to accomplish the necessary project goals.
3. Revegetation requirements. Where required by this Section, all required revegetation of cut

and fill slopes shall be installed prior to the issuance of a certificate of occupancy, acceptance of public facilities, or other time as determined by the Manager.

4. Inspections and Final Report. Prior to the acceptance of public facilities or issuance of a building permit for a structure, the developer's engineer of record shall provide a final report indicating that the approved grading, drainage, and erosion control measures were installed as per the approved plans, and that all scheduled inspections, as per **Section 5.0210(C)(6)**, were conducted by the engineer of record periodically throughout the project.

### **5.0225 Trees and Vegetation**

Trees and vegetation shall be maintained on site in order to provide protection against soil erosion and earth movement as well as to protect the aesthetic value of those hillside areas that may be highly visible to the surrounding community. Any proposed tree removal shall comply with the provisions of **Section 9.1000**, including no tree removal on slopes over 15% (before development) that results in clear cutting, as defined in **Section 3.0100**, except as follows:

- A. The removal of existing trees with a circumference of 25" or greater shall be limited to and within 10 feet of those areas required for the grading of roads, driveways, utilities, and the preliminary grading area for building pads. Tree removal that is confined to the approved grading plan (up to the grading limitations of **Section 5.0223(A)**) shall not constitute "clear cutting" as defined in **Section 3.0100**.
- B. A Vegetation/Revegetation Plan to stabilize slopes and minimize soil erosion is required based on the findings and recommendations in the Soils and Geology Report. The Vegetation/Revegetation Plan shall be prepared by a licensed Landscape Architect registered in the State of Oregon, and shall discuss any special measures proposed to protect water resources on or near the site for areas identified as particularly highly susceptible to erosion. Temporary erosion control measures, as they relate to construction activity, shall be, at a minimum, consistent with the guidance and requirements presented in the Erosion Prevention and Sediment Control requirements in the City's Stormwater Management Manual, and current erosion control and slope stability engineering practices. Revegetated areas shall be continuously maintained until vegetation is established. The maintenance of the revegetation shall be included as part of the Public Facilities Maintenance Bond.

### **5.0226 Surface and Groundwater Drainage**

All facilities for the collection of stormwater runoff for any development in the HPCD shall be required to be constructed on the site and in accordance with **Section 9.0500** and the following requirements:

- A. Stormwater facilities shall include storm drain systems associated with street construction, facilities for accommodating drainage from driveways, parking areas and other impervious surfaces, and roof drainage systems.

- B.** Stormwater facilities shall be, to the greatest extent feasible, the first improvements constructed on the development site.
- C.** Stormwater facilities shall be designed to divert surface water away from cut faces or sloping surfaces of a fill.
- D.** Existing natural drainage systems shall be utilized, as much as possible, in their natural state, recognizing the erosion potential from increased storm drainage.
- E.** Stormwater facilities that retain or detain flow shall be used to limit post-construction runoff volumes to pre-development levels specified in the Stormwater Management Manual. Each facility shall consider the needs for an emergency overflow system to safely carry any overflow water to an acceptable disposal point.
- F.** Stormwater facilities shall be designed, constructed and maintained in a manner that will avoid erosion on-site and to adjacent and downstream properties.
- G.** Stormwater systems which infiltrate shall be utilized unless determined infeasible by a Registered Civil Engineer or Geologist and documented in a Geotechnical Report meeting requirements in the Public Works Standards.

### **5.0227 Development in “Further Review Areas”**

The purpose of this section is to prevent the loss of human life and damage to property associated with “Rapidly Moving Landslides.”

This section applies only to the siting of dwellings and other structures inside a “Further Review Area.” This section does not apply to agricultural buildings or repair and maintenance of structures exempt from building codes under ORS 455.310.

- A.** Assessment of Hazard. A Soils and Geology Report shall be submitted, in accordance with **Section 5.0210(C)**, with a building permit.
- B.** Geotechnical Report. A Geotechnical Report, in accordance with **Section 5.0210(C)(5)**, shall be submitted for all land developments other than building permits. For building permits, a Geotechnical Report shall be submitted if the Soils and Geology Report recommends said report.

All Geotechnical Reports shall be submitted for review to the Oregon Department of Geology and Mineral Industries (DOGAMI). Comments from DOGAMI for land use developments shall be submitted with the development application.

- C.** Development Permitting.
  - 1.** No building permit shall be issued without a Soils and Geology Report. If a Geotechnical Report is recommended in the Soils and Geology Report, the report shall be submitted for review to DOGAMI. DOGAMI shall have the opportunity to provide comments to the City during the normal review of the building permit.
  - 2.** Alternative Siting and/or Mitigation.
    - a.** If an alternative site does not require mitigation and is available, the owner shall construct on the alternative site, if relocating does not exceed \$20,000. If relocating costs exceed \$20,000, the property owner may construct on the alternative site; or construct on the original site and implement recommended mitigation measures. Mitigation costs shall not exceed \$10,000.
    - b.** If the alternative site requires mitigation, the owner has the option to site the

structure in the alternative location if the cost of mitigation does not exceed \$10,000. The combined relocation and mitigation costs shall not exceed \$20,000.

- c. If mitigation for the alternative site exceeds \$10,000, the property owner may construct at the original site even if the recommended mitigation at the original site exceeds \$10,000. The required mitigation under this option shall not exceed \$10,000.
- d. Nothing in this section prohibits a property owner from constructing a dwelling or other structure on the lot or parcel and agreeing to pay mitigation costs that exceed the amounts established under this section.

**D. Disclaimer Notice Procedure.** A landowner allowed a building permit under this section (**Section 5.0227**) shall sign a statement that shall:

1. Be recorded with the Multnomah County Clerk, in which the landowner acknowledges that the landowner may not in the future bring any action against an adjacent landowner about the effects of rapidly moving landslides on or adjacent to the landowner's property; and
2. Record in the deed records for Multnomah County a nonrevocable deed restriction that the landowner signs and acknowledges, that contains a legal description complying with ORS 93.600 and that prohibits any present or future owner of the property from bringing any action against an adjacent landowner about the effects of rapidly moving landslides on or adjacent to the property.

