

# COWLITZ COUNTY

## DEPARTMENT OF BUILDING AND PLANNING

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### GENERAL GRADING REQUIREMENTS

ALL EXCAVATING, GRADING AND FILLS SHALL MEET THE REQUIREMENTS OF THE COWLITZ COUNTY GRADING ORDINANCE, THE INTERNATIONAL BUILDING CODE AND THE INTERNATIONAL RESIDENTIAL CODE

**GRADING STANDARDS** – Unless otherwise recommended in a soils engineering or engineering geology report, approved by the County, grading shall conform to the following standards.

- A. Appropriate erosion control measures shall be installed prior to any grading activity. Erosion control measures may be installed as outlined in Appendix A of the Cowlitz county Grading Ordinance, unless otherwise recommended by a project engineer All erosion control measures shall be maintained in place until vegetation is established for suitable erosion and sedimentation control. Sediment from grading operations shall not be permitted to leave the site or enter any surface waters or wetlands.
- B. Sites shall have a finished grade that drains away from structural foundations for a minimum of 10 feet.
- C. All sites shall be cleaned upon project completion. Installation of permanent organic erosion control measures such as grass seeding, landscaping, or other organic means of erosion control shall be in place prior to final approval.
- D. Cuts or fills of five feet in depth or greater shall be set back from property lines by a minimum of 25 feet. This can be decreased with appropriate engineering. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary.
- E. The top of cut slopes shall not be made nearer to a permit area boundary line than one fifth of the vertical height of cut with a minimum of 2 feet and a maximum of 10 feet. The setback needs to be increased for any required interceptor drains.
- F. The toe of fill slopes shall be made not nearer to the permit area boundary line than one half the height of the slope with a minimum of 2 feet and a maximum of 20 feet.
- G. Any proposed finished slope that is steeper than two horizontal to one vertical shall be engineered.
- H. Fill slopes shall not be constructed on natural or cut slopes steeper than 2 units horizontal in 1 unit vertical (50% slope) unless engineered.
- I. The ground surface shall be prepared to receive fill by scarifying to provide a bond with the new fill and, where slopes are steeper than 5 units horizontal in 1 unit vertical (20% slope) and the height is greater than 5 feet, by benching into sound bedrock or other competent material as determined by the engineer.
- J. All fills shall be compacted to a minimum of 90 percent of maximum density, unless approved as a waste site by the Director.
- K. The slope of cut or fill surfaces shall be no steeper than 2 units horizontal in 1 unit vertical (50% slope) unless the permittee furnishes a geotechnical engineering or an engineering geology report or both, stating that the site has been investigated and giving an opinion that a steeper slope will be stable and not create a hazard to public or private property.
- L. The ground surface shall be prepared to receive fill by removing all organic material, non-complying fill, and scarifying topsoil.
- M. Solid Waste as defined in CCC 15.30, Solid Waste Ordinance, and detrimental amounts of organic material shall not be used as fill material.

At the request of the applicant, the Director may approve the use of alternate grading standards. These approvals shall be based on sound engineering practices and may require the submittal of additional documentation, reports, or testing.

**\* SEE REVERSE SIDE FOR BUILDING SET BACKS FROM ASCENDING AND DESCENDING SLOPES.**

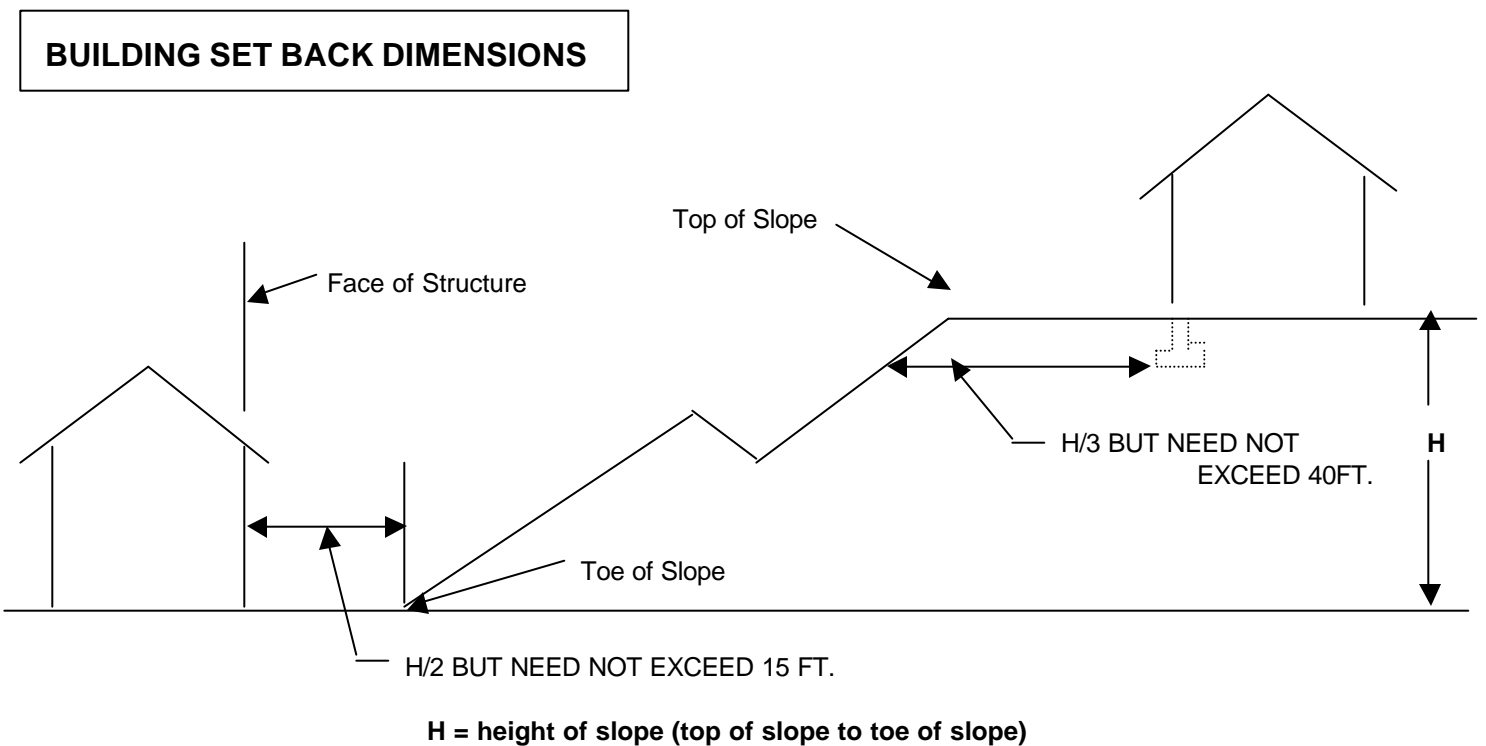
**THE FOLLOWING SECTIONS ARE TO HELP PROVIDE A BASIC KNOWLEDGE OF MINIMUM BUILDING SETBACKS FROM ASCENDING AND DESCENDING SLOPES. ALL ALTERNATIVE SETBACK REQUESTS SHALL BE SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL.**

**Support:** Foundations for all buildings and structures shall be set upon natural undisturbed grade. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice.

**Slope:** The bottom surface of footings shall not have a slope exceeding 1 unit vertical in 10 units horizontal (10% slope). Footings shall be stepped where the slope of the bottom of the footing will exceed 1 unit vertical in 10 units horizontal (10% slope).

**Building Setbacks From Ascending Slopes:** In general, buildings and structures below slopes shall be set a sufficient distance from the slope to provide protection from slope drainage, erosion and shallow failures. When buildings and structures are located adjacent to slopes steeper than 1 unit vertical in 3 units horizontal (33%), an adequate distance from such slopes shall be determined by using the formula in the diagram below. Submittals for alternative setbacks will require an evaluation and recommendation from a Washington State licensed engineer.

**Building Setback From Descending Slope Surface:** Footings on or adjacent to slope surfaces shall be founded in material with an embedment and setback from the slope surface sufficient to provide vertical and lateral support for the footing without detrimental settlement. When buildings and structures are located adjacent to slopes steeper than 1 unit vertical in 3 units horizontal (33%), an adequate distance from such slopes shall be determined by using the formula in the diagram below. Submittals for alternative setbacks will require an evaluation and recommendation from a Washington State licensed engineer.



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### SUPPLEMENTAL ADDENDUM TO MASTER APPLICATION FOR EXCAVATION AND GRADING

**Permits Required.** Unless exempted by Section 5 of the Cowlitz County Grading Ordinance, no person shall perform any grading activity without having first obtained a permit from the Cowlitz County Department of Building and Planning. Exemption from the permit process shall not relieve any person the requirement for installation of appropriate erosion control measures for their project. No permit or exemption granted pursuant to this chapter shall remove applicant's obligation to comply in all respects with the applicable provisions of any other federal, state, or local law or regulation.

**Volume of Work** - How much total volume of material is involved in the excavation and grading activity? (27 cubic feet=1 cubic yard)\_\_\_\_\_

**Indicate the type of excavation and/or grading activity.** (mark all that apply):

- cut
- fill
- grading
- foundation excavation
- driveway building
- placing culverts (Culverts proposed within the county road right-of-way for driveway access will require a Road Approach Permit from Cowlitz County Public Works Department.)
- retaining wall
- landscaping

**Give a brief explanation of the work to be done:**

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**Provide the following information:**

(Provide slopes as a horizontal to vertical ratio. For example - H:2 to V:1)

Information for cuts

No. cubic yards\_\_\_\_\_

Depth of cut maximum\_\_\_\_\_

Finished slope of cut\_\_\_\_\_

Slope prior to cutting\_\_\_\_\_

Information for fills

No. cubic yards\_\_\_\_\_

Slope prior to filling\_\_\_\_\_

Maximum depth of fill\_\_\_\_\_

Finished slope of fill\_\_\_\_\_

**What type of material is involved in the excavation and grading activity?**

	Amount (cubic yards)	Percentage of total amount
Dirt/soil	_____	_____
Large rock 12"+	_____	_____
Pit run 4" - 12"	_____	_____
Fines less than 4"	_____	_____
Concrete over 12"	_____	_____
Concrete under 12"	_____	_____
Other (State type)	_____	_____

**Will the proposed excavation and/or grading cause one of the following:**

- | YES                      | NO                       |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Create runoff   |
| <input type="checkbox"/> | <input type="checkbox"/> | Will runoff impact neighboring property                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Will finish grading retain runoff on property               |
| <input type="checkbox"/> | <input type="checkbox"/> | Will the effects of the runoff be negligible                |
| <input type="checkbox"/> | <input type="checkbox"/> | Will runoff be contained within an approved drainage system |

**Describe how your project will impact runoff in the area:**

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**What measures will be implemented for erosion control? (Silt fencing, straw cover, check dams, etc.)**

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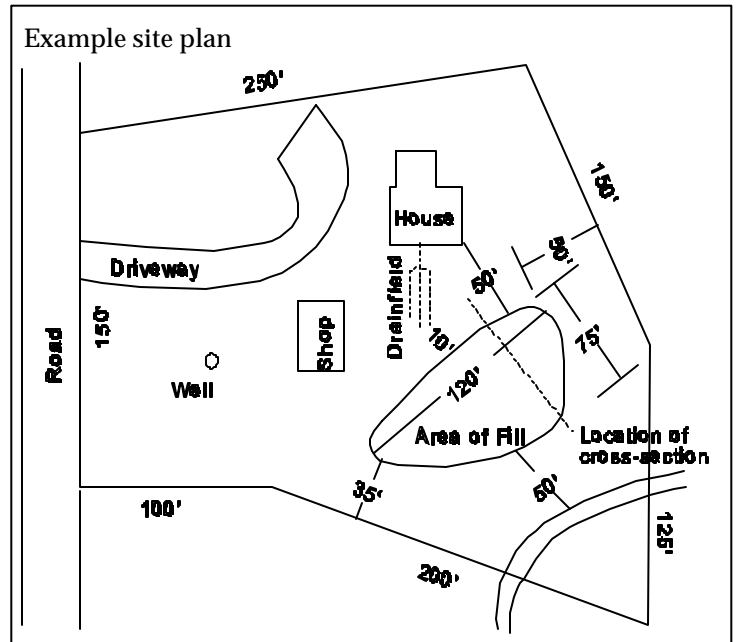
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**Note:** Some projects may require additional information or plans upon our review.

Signature \_\_\_\_\_ Date \_\_\_\_\_

**SITE PLAN MUST SHOW:**

1. Lot dimensions and property lines.
2. Directional arrow indicating north.
3. Any existing or proposed roads or driveways.
4. All proposed and existing structures and their distances to each other, to property lines, to the centerline of the road and to ascending and descending slopes.
5. Location of drain fields, slope of land, wells, and their distances to proposed or existing structures or projects.
6. Location and dimensions of any excavation or grading.
7. Bodies of water, natural and manmade (streams, creeks, rivers, ditches, etc.), and distance to proposed structures or developments.
8. All easements (utility, access, etc.).
9. Adjacent property addresses and uses.
10. Location of retaining walls.



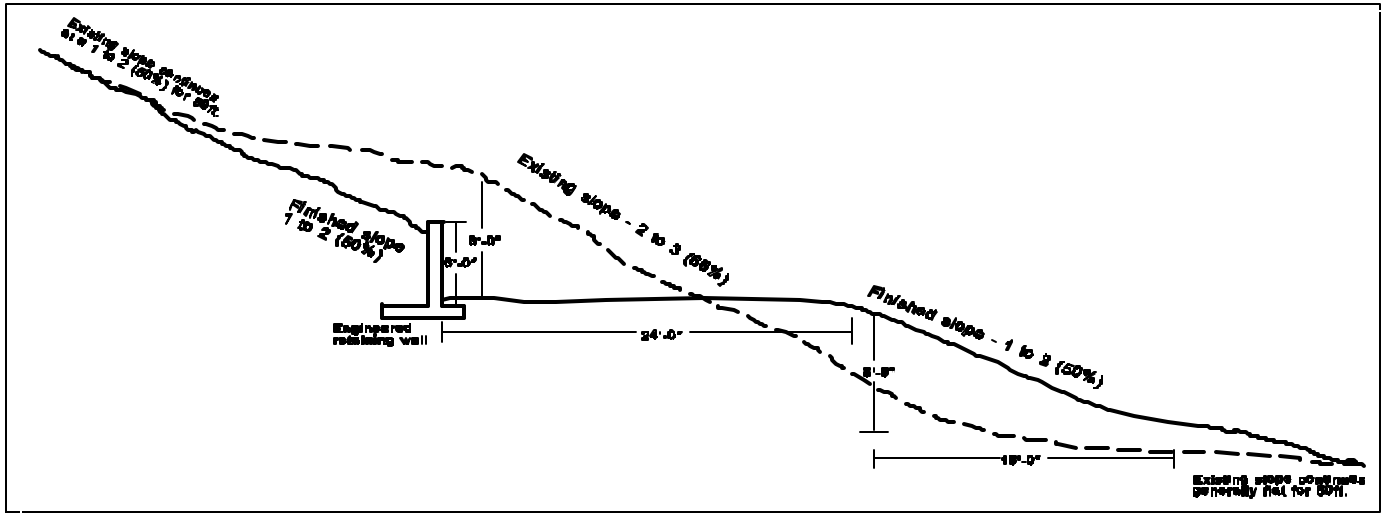
Applicants Site Plan:

Blank area for the Applicant's Site Plan.

CROSS SECTION MUST SHOW:

1. Maximum depth of fill and maximum height of cut.
2. Buildings and their setbacks to ascending and descending slopes.
3. Existing grade (before any work is done) to extend a minimum 20' beyond scope of work.
4. Finished grade of cuts and fills to extend a minimum of 20' beyond scope of work.
5. Retaining walls.
6. Grade of all existing cut and fill areas (ex. 2 units horizontal to 1 unit vertical).

Example cross section:



Applicant's cross-section

