

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Grading Regulations in Seattle

February 24, 2010

This Tip is designed to help applicants understand the requirements for sites regulated by Seattle's Grading Code (SGC) - Seattle Municipal Code (SMC) Chapter 22.170. This code applies to both permanent and temporary grading, as well as other land disturbing activities such as replacement of impervious surface, maintenance and protection of grades, slopes, soil stability and the correction of hazards related to any of the above. The purpose of this regulation is to protect the graded site and adjoining public and private properties, preserve natural drainage patterns and watercourses and control pollution.

All grading activity, whether or not it requires a permit or approval from the City, must comply with the provisions of the SGC. When the grading activity is not associated with an active building permit, a separate grading permit issued by the Seattle Department of Construction and Inspections (Seattle DCI) may be required. When grading is associated with a building permit, grading review and approval are a component of the building permit and a separate grading permit is not required. Grading review takes place only when the thresholds in section 22.170.060 of the SGC are exceeded.

GENERAL STANDARDS

The SGC includes specific provisions regarding protection of adjoining property, erosion control, fencing, boundary designation and temporary stockpiling during grading activity. Seattle DCI Director's Rule 16-2009, "Construction Stormwater Control Technical Requirements Manual," specifies the best management practices (BMPs) for meeting erosion control requirements.

When the existing grade of a site is altered by filling, excavating, or moving of earth materials, the owner shall protect all adjoining property during grading

and construction from encroachment or collapse by sloping the sides of the temporary grading at a slope that is safe and not steeper than 1 horizontal to 1 vertical. In addition, adjoining property shall be protected from encroachment or collapse by sloping the sides of the permanent grading at a slope not steeper than 2 horizontal to 1 vertical. The Director may approve permanent slopes of greater steepness based on a design by the geotechnical engineer of record. If a slope stability analysis is deemed necessary by the geotechnical engineer or the Director, the analysis shall show a factor of safety of at least 1.5 for static conditions and 1.1 for pseudostatic conditions. In areas of known unsuitable soils, the Director is authorized to require slopes of lesser steepness.

GRADING PERMIT THRESHOLDS

The SGC specifies when grading may take place without a permit or approval from Seattle DCI. Exempt activities, including most projects in the right-of-way, the majority of projects on publicly owned property and some utility projects, do not need permits from Seattle DCI but must comply with the standards set forth in the SGC. Contact the Seattle Department of Transportation for permit requirements when grading in the right-of-way. SGC 22.170.060B lists exempt activities and addresses City projects.

Thresholds for when a permit or approval is required relate to characteristics of the site and the quantity of earth movement proposed. "Site" as defined by the SGC for grading review purposes may include two or more contiguous project sites and the work proposed within the City right-of-way. Seattle DCI may group two or more project sites together if they are under the control of the same person or persons and construction will occur at approximately the same time.

General Sites: A Seattle DCI grading permit or approval is required under any one of the following conditions:

1. Grade changes of more than four feet and
 - a. the cumulative volume of excavation, fill, dredging or other earth movement is more



- than 50 cubic yards (over the lifetime of the site) or
- b. the grading will result in a permanent slope steeper than three horizontal to one vertical, or
 - c. the grading will result in a temporary slope steeper than one horizontal to one vertical
2. Any grading if the combined volume of excavation, filling, and other movement of earth material exceeds 500 cubic yards
 3. One acre or more of land disturbing activity on a site
 4. 2,000 square feet or more of new or replaced impervious surface.

Shoreline Districts: Within Shoreline Districts as defined in SMC 23.60.010, a Seattle DCI grading permit or approval is required for any grading of lands covered by water; or if there will be any land disturbing activity within 100 feet of the ordinary high water mark; or if the combined volume of excavation, filling, and other movement of earth material is more than 25 cubic yards in the area between 100 and 200 feet of the ordinary high water mark.

Riparian and Wetland Environmental Critical Areas: A Seattle DCI grading permit or approval is required if there will be any land disturbing activity in an ECA Riparian Management Area or wetland or wetland buffer as defined in SMC 25.09.020.

Landslide-Prone and Steep Slope Areas: A grading permit or approval is required if more than 25 cubic yards of earth will be moved. Grading in landslide-prone and steep slope areas is prohibited or restricted as described in Regulations for Environmentally Critical Areas (ECA) SMC 25.09.

“Potentially Hazardous Locations”: A permit is required to move any earth on these sites; defined as existing and abandoned solid waste disposal sites and hazardous waste treatment, storage or disposal facilities. For work on potentially hazardous sites, provide a copy of all applicable permit or approval applications from the appropriate regulatory agencies.

Temporary Stockpiles: A permit is required if grading exceeds the threshold levels for the type of site (See Table 1).

“In-Place Ground Modification”: A permit is always required, unless the department finds the work to be insignificant.

Grading near Public or Private Properties: A permit is required when excavation or fill in excess of three feet near the public place creates a slope exceeding 1:1 (45 degrees).

Table 1 summarizes when grading approval is required for various sites and also indicates when a shoreline permit is required. Application materials to be submitted to Seattle DCI for grading permits or approvals are detailed in SGC 22.170.070. When the only grading proposed is incidental to construction and within four feet or less of the building footing, the only information required is location of temporary stockpiles, which may be shown on the plot plan. Please note that a grading permit is not required for the exempted activities listed in subsection 22.170.060B of the SGC.

Table 1

	TYPE OF SITE				
Cumulative Threshold, in cubic yards	ECA Riparian Management Areas, Wetlands, Wetland Buffers, and Shoreline Habitat and Buffer (includes lands covered by water, and from ordinary high water to 100 feet) *	Landslide-Prone Areas and Steep Slopes	Shoreline District (between 100 feet from ordinary high and 200 feet from ordinary high water) **	Potentially Hazardous	All Other Sites and ECAs
0	G1	G1	G1	G1	G1
>0	F, G	G2, G4, G5		G	G2, G4, G5
>25		G	G		
>50					G3
>500					G

G Grading permit is required.

G1 Grading permit is required for in place ground modification only, except when waived by the director.

G2 Grading permit is required if:

- grade change is >4', and
- permanent slope is >3:1, horizontal to vertical, OR
- temporary slope is >1:1, horizontal to vertical

G3 Grading permit is required if:

- grade change is >4'

G4 Grading permit is required if:

- One acre or more of land disturbing activity on a site, or
- 2,000 square feet or more of new or replace impervious surface.

G5 Grading permit is required near a public place (streets, alleys, or other rights of way) if:

Excavation or fill in > 3 feet, measured vertically, on private property within any area between the vertical prolongation of the margin of a public place, and a 100 percent slope line (45 degrees from a horizontal line) from the existing elevation of the margin of a public place to the proposed elevation of the private property

F Floodplain Development Grading in areas of special flood hazard, per the Flood Insurance study for King County, Washington and Incorporated Areas” and Flood Insurance Rate Maps filed with the City Clerk in C.F. 296948, must comply with the Seattle Floodplain Development Ordinance (Chapter 25.06, Seattle Municipal Code). For more information on Floodplain Development regulation, please see SMC 25.06 and Tip 111, Construction and Development in Floodplains.

*For more information on work in ECAs, please see SMC 25.09 as well as Tips 326, 327, 328, 331 and 331A.

**For more information on shoreline permitting, please see SMC 23.60 as well as Tips 209 and 209A.

Note: Grading in excess of 500 cubic yards or grading on sites containing certain ECAs may need to be assessed by the City of Seattle per the State Environmental Policy Act (SEPA) and the Seattle SEPA Ordinance (Chapter 25.05, Seattle Municipal Code). For more information on SEPA requirements, please see SMC 25.05 and Tip 208.

GRADING PERMIT SUBMITTAL REQUIREMENTS

For most projects, submittal requirements will include a general vicinity map, legal description of the site, a topographic map at two-foot contours showing original and finished grade and property lines, cross sections, and a plot plan including information about improvements to the site, drainage patterns and drainage control facilities, trees and vegetation on the site and location of designated environmentally critical areas. The information regarding tree and vegetation shall identify all existing trees including their species, caliber, and the proposed disturbance. See Tip 103A and Tip 103B for site plan requirements for non-ECA and ECA sites, respectively.

In addition, a construction stormwater control plan and post construction soil management plan (CSC/PCSM) is required for all projects. The plan outlines the temporary erosion and sediment control measures associated with proposed grading activities. In addition, all areas subject to clearing, grading, or compaction that will not be covered by impervious surface, incorporated into a drainage facility, or engineered as structural fill or slope shall, at project completion, meet post construction soil quality and depth requirements. Only the areas of the sites where existing vegetation and/or soil are disturbed or compacted must be restored.

Projects greater than 5,000 square feet of new or replaced impervious surface of greater than one (1) acre of land disturbance area will require a CSCP/PCSP plan prepared by a licensed civil engineer. Refer to Tip 531 for more information on post construction soil management.

Additionally, the Department of Ecology requires a completed Notice of Intent (NOI) application for any land disturbing activities such as clearing, grading, excavating, and/or demolition if the project:

1. Disturbs one or more acres of land area OR
2. Is "part of a larger common plan of development or sale" that will ultimately disturb one or more acres of land AND
3. Discharges stormwater from the site into state surface water(s) or into storm drainage systems, which discharge to state surface waters OR
4. Is a significant contributor of pollutants to waters of the state, as determined by Ecology for any size construction site.

All forms and additional information are accessible online at Ecology's construction website: www.ecy.wa.gov/programs/wq/stormwater/construction.

GRADING PERMIT APPROVALS

Grading approvals or permits issued by Seattle DCI will often include conditions such as limiting the work to specific seasons or weather conditions, sequencing of work, special inspections, conformance to geotechnical engineer's recommendations, best management practices, revegetation, and long-term maintenance of the site.

Grading permits are valid for 18 months and may be renewed for up to an additional 18 months unless the department specifies a shorter or non-renewable time frame at issuance.

GRADING PERMIT INSPECTIONS

At a minimum, the following inspections are required by Seattle DCI: (Note: other inspections may be required by a private geotechnical engineer or biologist if the project is subject to special inspections)

- First Ground Disturbance Inspection is required after permit issuance and prior to ground disturbance. The site inspector and applicant will discuss proposed erosion control measures and the CSCP/PCSP plan.
- Site Final Inspection is required before the grading permit can be finalized. A site inspector will ensure that the temporary erosion control measures have been removed, the final erosion control is in place, and the soil management plan has been implemented.

To schedule an inspection, call 684-8900 or go online to: <http://web6.seattle.gov/DPD/InspectionRequest/default.aspx>.

HELPFUL RESOURCES

The following resources are available on the 20th floor of the Seattle Municipal Tower or online at: www.seattle.gov/sdci.

Seattle Municipal Codes (SMC):

- Grading Code – SMC 22.170
- Stormwater Code – SMC 22.800
- State Environmental Policy Act - SMC 25.05
- Environmental Critical Areas Ordinance - SMC 25.09

Tips:

- Tip 103A, *Site Plan Guidelines*
- Tip 103B, *Environmentally Critical Area Site Plan Requirements*
- Tip 106, *General Standards for Plans and Drawings*
- Tip 111, *Construction and Development in Floodplains*
- Tip 208, *When Environmental Review Is Required in Seattle*
- Tip 209, *Master Use Permit Application Requirements for Shoreline Permits*
- Tip 209A, *Shoreline Substantial Development Exemptions Application Instructions*
- Tip 242, *Tree Protection Regulations in Seattle*
- Tip 326 – *Environmentally Critical Areas: Wetlands and Fish & Wildlife Habitat Conservation Areas*
- Tip 327a, *Environmentally Critical Areas Exemptions and Modifications to Submittal Requirements*
- Tip 327b, *Environmentally Critical Areas Small Project Waivers Application Instructions and Submittal Requirements*
- Tip 328, *Environmentally Critical Areas Exceptions*
- Tip 331, *Environmentally Critical Areas — Tree and Vegetation Overview*
- Tip 331A, *Environmentally Critical Areas: Vegetation Restoration*
- Tip 508, *Grading and Retaining Wall Construction Near or Adjacent to Property Lines*
- Tip 531, *Green Stormwater Infrastructure on Private Property - Post Construction Soil Management*

Director's Rules (DRs):

- DR 8-89, *Development Activity Requiring a Permit or License Under the Floodplain Development Ordinance: Exemptions*
- DR 20-90, *Regulation and Enforcement of Investigative Field Work Performed in Environmentally Sensitive Areas and Shorelines*
- DR 8-93, *Acknowledgement of Risk of Development on Sites with Potentially Hazardous Conditions*
- DR 3-2002, *Requirements for Allowing Grading in Environmentally Critical Areas Between October 31st and April 1st (Dry Season Extension Letter)*
- DR 33-2006, *General Duties and Responsibilities of Geotechnical Engineers*
- DR 3-2007, *Application Submittal Requirements in Environmentally Critical Areas*
- DR 6-2009, *Landscape Standards for Compliance with the Land Use Code and SEPA Requirements*

QUESTIONS?

For more information about grading approvals, permits, standards or submittal requirements for a specific project, contact:

- Site Development staff: (206) 684-8860
- Drainage & Sewer Review staff: (206) 684-5362 or sidesewerinfo@seattle.gov
- Applicant Services Center: (206) 684-8850

Seattle DCI's main offices are located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave.

Access to Information

Links to electronic versions of Seattle DCI **Tips**, and **Forms**, and are available on the "Tools & Resources" page of our website at www.seattle.gov/sdci. Paper copies of these documents are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.